Supplement to *"The Economic Record"*, Vol. 37

THE ECONOMIC RECORD

THE JOURNAL OF THE ECONOMIC SOCIETY OF AUSTRALIA AND NEW ZEALAND

VOLUME THIRTY-SIX

1960

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MELBOURNE UNIVERSITY PRESS

THE UNIVERSITY OF MICHIGAN
JUN 23 1960
PERIODICAL READING ROOM

Vol. XXXVI No. 73

THE ECONOMIC RECORD

March 1960

ESSAYS

in honour of

SIR DOUGLAS COPLAND

Annual Subscription £2.2.0 Single Copies 14s.

MELBOURNE UNIVERSITY PRESS

Registered in Australia for transmission by post as a periodical

PROFESSOR SIR DOUGLAS COPLAND
K.B.E., C.M.G., D.Sc.

ESSAYS
in honour of
SIR DOUGLAS COPLAND

THE ECONOMIC RECORD
MARCH 1960

MELBOURNE UNIVERSITY PRESS

PRINTED BY BROWN, PRIOR, ANDERSON PTY. LTD., MELBOURNE

PREFACE

The Economic Society of Australia and New Zealand is delighted to honour our Founder, first President and first Editor at the peak of his long and distinguished career. As a New Zealander who has given most of his life to serving Australia without ever forgetting his New Zealand origins and interests, he personifies the dual nationality of our organization. He has been a pioneer all his life. In the many jobs he has held he has usually been the first occupant. And among the many people who have worked with him, he is first in our hearts.

We wish him well now as he enters another phase of his career.

R. I. Downing

DOUGLAS BERRY COPLAND

K.B.E. (1950), C.M.G. (1933), M.A., D.SC. (New Zealand, 1925), LITT. D. (Melbourne, Queensland and Harvard), LL.D. (McGill, Clark, Carleton, B.C., Adelaide, Tasmania), D.C.L. (Bishop's).

1894	Born February 24, at Timaru, New Zealand
1915	M.A. in Economics, after education at Waimate District High School and Canterbury College
1917	Lecturer in History and Economics, Director of Tutorial Classes, University of Tasmania
1920–24	Professor of Economics, University of Tasmania and Dean of the Faculty of Commerce
1924–44	Sidney Myer Professor of Commerce, and Dean of the Faculty of Commerce, University of Melbourne
1925–45	Editor of *The Economic Record*
	Representative in Australia and New Zealand for the Social Sciences Division of the Rockefeller Foundation
1931	Chairman of the Committee of Economists and Under-Treasurers which, reporting to the Australian Loan Council, initiated the Premiers' Plan
1933	Marshall Memorial Lecturer, Cambridge
1938–45	Chairman of the State Economic Committee, Victoria
1939–45	Commonwealth Prices Commissioner
1940–45	Commissioner of the State Savings Bank, Victoria
1941–45	Economic Consultant to the Prime Minister
1944–45	Truby Williams Professor of Economics, University of Melbourne
1945	Godkin Lecturer, Harvard University
1946–48	Australian Minister to China
1946	Emeritus Professor, University of Melbourne
1948	Member of the American Philosophical Society
1948–53	First Vice-Chancellor, Australian National University
1952	President, Australian and New Zealand Association for the Advancement of Science
1953	Sidney Ball Lecturer, Oxford Finlay Lecturer, University College, Dublin
1953–56	Australian High Commissioner to Canada
1954	Chairman, Committee 2 of the United Nations General Assembly
1955	President of the Economic and Social Council of the United Nations
1956–60	First Principal, Australian Administrative Staff College

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The Economic Record

Vol. XXXVI March, 1960 No. 73

*INTRODUCTION**

Douglas Berry Copland, Knight, Professor, Ambassador, Vice-Chancellor, Administrator, Lecturer, Author, Principal and friend of many, many people with all sorts of views and opinions on all sorts of subjects, came to Australia from his native New Zealand in 1917 to be Lecturer in History and Economics at the University of Tasmania. There he met Professor L. F. Giblin, who was destined to influence him and his thinking greatly, then and subsequently.

Giblin had a big influence also on the developments that followed in the University of Tasmania, where the Honours School in Economics in the Faculty of Arts was established in 1922, and also the first Faculty of Commerce in Australia with the degrees B.COMM. and M.COMM., and that was not the only time his influence was felt.

Coming to Melbourne in 1924 Copland was appointed the first Professor of Commerce in the University of Melbourne, and there again established an Honours School of Economics and a Faculty of Commerce. In both cases, his students in economics and commerce were destined to have a big influence on both the public and private sector of the economy. Many of them occupy high places now in the State and Commonwealth Public Services, the most notable example being Roland Wilson at the Commonwealth Treasury. The Faculty of Commerce in Melbourne commenced in 1925 with over 200 students, and the number steadily expanded and reached 500 by the time Professor Copland left in 1939.

In association with Giblin, Wickens, Brigden and Dyason, Copland worked on the preparation of a report for the then Prime Minister, Stanley M. Bruce, in 1928-29, on the Australian tariff. This turned out to be pioneer work of the first importance, and the report was published by the Melbourne University under the title *The Australian Tariff : An Economic Enquiry*. It was the first economic work to be a best seller in Australia, a paper-covered edition at half-a-crown selling out within about a week. All members of the group contributed to the analysis and conclusions, but it would be fair to say that Giblin's was the most original contribution. The report set out to estimate the excess cost of the tariff and what sector of the community it ultimately fell upon. It then went on to point out that an excess cost was justified if it was a moderate amount and granted to industries that were subject to increasing returns. In this event, as demand increased and production expanded, the cost per unit would fall and the excess cost would fall. The report was received

* The Honourable Arthur A. Calwell, Leader of the Federal Opposition, was a war-time and post-war-time associate, as Minister for Information and Immigration, of Sir Douglas Copland.

with great enthusiasm in Australia, and had a determining influence upon the work of the Tariff Board in the thirties. In economic circles abroad there was a good deal of scepticism, but Professor Taussig, of Harvard, said that he wished there had been a group of economists in the U.S.A. who could have made a similar analysis for America.

My first memory of Professors Giblin and Copland was of a meeting in the Melbourne Town Hall in 1930 where representatives of manufacturers, retailers, unions and political parties met to devise ways and means to deal with the growing evil of unemployment. The professors were the only people who said nothing. A little later came the Premiers' Plan sponsored by Giblin and Copland and others. Labor governments that implemented this plan lost office and the party wandered for years in the political wilderness. If only the Theodore fiduciary note issue scheme had been allowed to pass the anti-Labor dominated Senate, and the cut in interest rates had been more severe, Australia would not have had to suffer the evils of the depression for so long and so gravely. But that is now history, and, maybe, we have learnt from the event.

For a long time Copland's views were unacceptable to the business community, and this was particularly true after the Premiers' Plan. The views of an intelligent man normally are at odds with conventional wisdom. Copland's case proves the rule. He has never been fully accepted in commercial circles, and only partially accepted in the political world, although in the post Premiers' Plan period he has made very great contributions on a wide variety of subjects, and seems to have been trusted more by Labor governments than by the governments supposedly devoted to the cause of private enterprise. Those who control the private sector of the economy have intimate and constant relations with non-Labor governments and their influence is not only opposed to new ideas and conceptions in both the economic and political spheres, but is sometimes decisive in determining government policy. Such a situation hampers an imaginative economist like Copland, who has to rely on the indirect approach of articles and lectures, rather than by direct approaches to Ministers and Departmental heads, to affect the trends of policy at the source.

Copland is a pathfinder, first in the Giblin tradition, and now in his own right. In the late 1930's he was chairman of what was known as the State Economic Committee in Victoria under Albert Dunstan, and was also a member of the State Savings Board until the end of World War II. In war-time, from 1939-45, he was Commonwealth Prices Commissioner, and from 1941 Economic Consultant to the Prime Minister. His services as Economic Consultant were mainly with the Labor Government from 1941, though he was appointed by the Menzies Government originally. He had close associations with, and direct access to, both Mr. Curtin and Mr. Chifley. It was due to their confidence in him that his policy of price stabilization was adopted in 1943. This held the price level in Australia at a figure of about 22½% above the pre-war level, and was recognized as

the most successful price administration among the Western powers.

In 1944-45 Prime Minister Curtin sent Professor Copland abroad to report on post-war plans, and also to report upon the Tennessee Valley Authority at a time when the Snowy Mountains plan was under consideration. Late in 1945 the Chifley Government asked Professor Copland to go to China as Minister to succeed Sir Frederick Eggleston. At first he declined for a number of reasons, but under pressure accepted the office. Leaving China towards the middle of 1948, Ambassador Copland became the first Vice-Chancellor of the National University. He was then able to enter again into public discussion of economic policy and to contribute articles to the press and journals.

In 1953 the Menzies Government sent Professor Copland on his second diplomatic mission, this time as High Commissioner to Canada. This was most important because the National University was now securely launched and Canada was the country where the world's economic structure could be best studied, and the growing strength of Communism and its impact on the Western world could be best appreciated.

While in Canada Professor Copland represented Australia many times at the United Nations and, after becoming chairman of some of its leading committees, helped considerably to define international policy in regard to under-developed countries. These contributions made him a leading figure in the international field, and most certainly had something to do with the policies which such bodies implemented and continued. One such is the Colombo plan. It may well have been called the Copland plan.

When Australia was a member for two years of the Economic and Social Council of the United Nations, Professor Copland was its Vice-President, and in 1955 became its President, first in New York and later in Geneva. It was his idea that the Western countries should establish an international fund of one per cent. of their national incomes to assist under-developed countries. Canada supported the idea, but Australia let him down. Professor Copland still believes that some day this is bound to come, and that it is the only way in which the Western world can effectively compete with the Communist world for a constructive association with the under-developed, or what might also be called the uncommitted, world.

Returning to Australia at the end of 1956 Sir Douglas Copland became first Principal of the Australian Administrative Staff College, a post he is relinquishing in the middle of this year. Two hundred and fifty executives of public and private enterprise attended its sessions in the four years, and to the extent that all contributions given by companies and individuals are exempt from income tax, the Federal Government makes a substantial contribution to the success of their venture. The most beneficial work of the College lies in the development of the view that the public and private sectors of a mixed

economy, in a pluralistic society like Australia, are joined in partnership and that each is vital to the other.

Before I conclude this appreciation of the work of Professor Sir Douglas Copland, and, indeed, of the late Professor Giblin, in whose tradition he walks, and of all the other economists whom they have trained, and who have influenced the economic thinking and administrative work of the Commonwealth in particular, I want to mention two other matters. In 1948 I was more than happy when Professor Copland accepted my invitation to join the Immigration Planning Commission of the Department of Immigration, a post to which he devoted much of his abilities and energy, and which he was kind enough to say he regarded as his most cherished appointment. His recent appointment by the present Minister for Trade to head an Australian Trade Mission to China, indicates a further appreciation of the diversity of his abilities, the range of his activities, and the extent of his associations.

And the second matter deals with *The Economic Record,* which has done me the honour of inviting me to record my views on Sir Douglas Copland's work as a public administrator. Douglas Berry Copland was the principal actor in founding the Economic Society of Australia and New Zealand in 1924, and edited *The Economic Record,* the journal of the Society, from 1924 until his departure for China in 1945. The first number appeared in November, 1925, and by his endeavours, and those of many willing helpers, this journal became a success immediately, both at home and abroad, and continues to maintain its high place among the periodical publications that circulate among economists, and business people and parliamentarians and union leaders throughout the world.

ARTHUR A. CALWELL

Canberra.

THE ECONOMICS OF THE SOVIET CHALLENGE

This special issue of *The Economic Record,* in recognition of the distinguished work of Sir Douglas Copland, will reach a wide international circle and will be read in many lands. The topic which I have chosen to write about is obviously of the greatest international importance. I shall, however, consider the problem from the standpoint of the United States. What I shall have to say about American practices and policies will, here and there, in part apply to other countries. But it is, nevertheless, the United States that I am writing about, not the so-called western bloc in general.

The *trend* rate of growth of real income—gross national product at constant prices—compounded per annum, has been around 3 per cent. during the last three decades in the United States. As nearly as one can learn from the most competent researches on Soviet rates of growth, the Russian GNP growth rate in real terms has been around 7 per cent. The growth of industrial production, as distinct from the GNP, has apparently been considerably greater—around 10 per cent. In contrast, our industrial production, compounded annually, has grown at the rate of 3¼ per cent.

If we could assume that these rates of growth will continue over the next two decades, the Soviets would catch up with us by 1980 at a GNP of 900 billion dollars in terms of 1959 prices.

It could with a good deal of justification be argued that the Soviet rate of growth is in large part due to the fact that they started from a low base. Possessing potentially rich resources, still largely under-developed, together with a physically strong and energetic labour force, the possibilities of growth in the earlier stages of development were naturally very great. This is all the more true in view of the fact that it was possible to import the whole accumulated technology of the western world as rapidly as it could be installed without having to wait for the slow and tedious processes of invention and experimentation. It can therefore be argued that once the Soviet economy has measuredly caught up, its rate of growth will slow down to that of the United States and other western countries.

I believe that there is very much force in this argument. Nonetheless, it would be a mistake to become too easily convinced that the spread between their rate of growth and our own will completely disappear automatically in a sufficiently short time span to ensure the maintenance of American economic superiority.

There are certain factors favourable to growth which are not permitted to come into play in our system as we now operate it. Unless this is remedied, there is reason to believe that the Soviet rate of growth, while not as large as in recent decades, will continue to exceed that of the United States.

Basically, the matter simmers down to this. Under our system, as it is now operated under currently dominant political tenets, the federal government is not permitted to play the role which is requisite for adequate growth and for the fulfilment of the cultural needs of modern urban communities. The government is prevented from helping private enterprise to attain its full potential, and it is not assuming sufficient direction of production to ensure the optimum use of our productive resources. The current practices and conventions which limit our rate of growth[1] are detailed below.

I

Under currently accepted economic precepts, the development of power and other natural resources is stopped at the point where the investment is self-liquidating. This is true whether the development is undertaken by the government, as in the case of the TVA, or by private enterprise.

Consider the TVA. It is generally held that no such project should be undertaken unless it can reasonably be expected to yield a monetary return sufficient to amortize the initial capital investment and to cover the market rate of interest over and above all operating expenses. Indeed, the TVA has demonstrated thus far that it fully measures up to these rigid standards.

At the time of its inception the TVA involved, it is true, a tremendous risk. No one knew whether or not it could pay out. Opponents regarded the whole project as a piece of political folly. And supporters were quite aware that they were assuming a grave calculated risk. There was, however, general agreement that if the venture could not, within a reasonable period, cover full amortization and interest charges over and above all operating expenses, the project would have to be deemed a failure.

Now the solid economic facts are quite otherwise. But this is a lesson that the country has not even begun to learn. It is indeed one of those many economic truths which run counter to commonly held views, and which will never win wide acceptance except on the basis of actual experience. Congress and the electorate have never grasped the fact that even though power and other resource developments may not *directly* pay out, they may nonetheless be economically profitable to the country as a whole.

To appraise the economic justification of any development project, account must be taken not only of its direct and immediate earning

1. It could be argued, as Professor Galbraith indeed has in his widely read *The Affluent Society*, that leisure may be as important, or even more important, than growth. This could well be true at some future date, but in the kind of world in which we still live I am unable to follow this line of thinking. We still desperately need growth, partly because we have a long way to go before income distribution has reached a tolerable degree of equality, partly because the backlog of unsatisfied community needs is overwhelming, and partly because a peaceful world is not yet in sight.

possibilities but also its impact upon the agriculture and industry served by it. In short, account must be taken of the role of external economies. And while the theory of external economies has long since been fully developed, economists have done very little to educate the country generally on a matter which is of the utmost importance.

Yet the point can easily be made quite clear to the general electorate if one compares: (a) the profit outlook of a private corporation contemplating a power development in an area in which it owns no business whatever except the power project itself, and (b) the profit outlook which confronts a private corporation that already owns all the industries in the region. In the latter case, the increased profits accruing to these industries may far more than offset any losses sustained by the power company itself. Under the circumstances, the overall private corporation would certainly undertake the power development even though it itself may operate at a loss.

This simple illustration explains precisely *one* reason why the Russian system may be capable of a more rapid rate of growth than the American system as now operated. Not until we are able as a nation to grasp the overall vision of the impact of resource development *on the economy as a whole* will we be able to match, so far as this one factor is concerned, the Russian rate of growth. To compete on equal terms, public investment in resource development will have to be pushed far wider and deeper than we have thus far been prepared to go.

II

The Russian system may, moreover, continue to provide a rate of growth in excess of that achieved by the American system as now operated by reason of our conventional method of dealing with obsolescence.

Under a system of private enterprise, established businesses with heavy investment in plant and equipment are loath to scrap existing facilities, and will certainly not do so *merely* because the new technology is more efficient than the old. New machinery will not be introduced, the old will not be scrapped, until it becomes quite clear that the new lower costs more than offset the losses involved in writing-off the old equipment. There is, furthermore, the great risk that, in a rapidly changing world, investment made today in the most up-to-date equipment may by tomorrow be rendered obsolete by still newer techniques. It might well be the part of wisdom to wait until time will have sharply reduced the write-off losses.

In the days of ruthless competition when new firms were constantly entering almost every field of manufacture, established companies were compelled to write off obsolete equipment whether they liked it or not. The new competitors entered the market with the most recent techniques. Old concerns were forced into line or driven to the wall. Survival required a rapid rate of obsolescence. Nowadays,

when only a few giant firms occupy the field, and when the capital required to compete runs into hundreds of millions and even billions, new entrants no longer threaten established firms. The firmly entrenched companies can calculate more coolly than formerly the cost of a write-off of old equipment against the economies of the new techniques. Pressure to introduce new processes is indeed strong, and vast sums are spent on technological research. But the pressure is less compelling in a monopolistic or quasi-monopolistic situation.

All studies, from Hoover's famous report on *Waste in Industry* in the early 'twenties to the present, disclose the fact that a large part of American industry falls far below the level of what could be achieved if full advantage were taken of known management and production techniques. Under the Russian system, however, decisions to introduce *all around* the most up-to-date equipment can be made purely on the basis of productivity, not on the basis of profit calculations of giant concerns relatively free from severe competition, or of smaller concerns in fields dominated by sluggish custom and practices. To be sure, Russian technology still falls far short of current technological knowledge. The available resources are limited. The GNP is still relatively small, and the amount of capital formation that can be squeezed out over and above the military output and the urgently necessary consumers' goods, while *relatively large,* is absolutely small. Yet as GNP grows the capacity to pump out capital formation will progressively increase. In the Russian system the speed with which obsolescent equipment is depreciated is not based on profit calculations but only on the rate of technical progress and the limits imposed by scarcity of resources.

An obvious solution for American industry is to stimulate investment in the newest techniques by the device of accelerated depreciation. This amounts to an interest-free loan from the government to private business. Accelerated depreciation was indeed incorporated into our tax legislation in 1954. It should be carried much farther than the present law permits. But it should be administered countercyclically. Long-term growth requires a rapid rate of depreciation and replacement. But stability requires a cyclical adjustment of the accelerated depreciation privilege. The burst of investment of 1955-57 was primarily responsible for the recession of 1958. Bursts of investment are inimical not only to stability, but also to sustained rates of growth. Tax provisions relating to accelerated depreciation should be very generous in order to permit maximum growth. But they should be cyclically adjusted in order to foster stability and *sustained* growth.

III

The Soviet system may be able to maintain a higher rate of growth than the American system as now operated because their system permits in the long run an overall investment in industry

as a whole to the point of "full investment". This means that investment in plant and equipment can be carried to the full limit of capital productivity, namely the point at which any further investment (given the state of technology) would yield no additional net output. New techniques and a growth in the labour force would of course open up further outlets for investment. These new outlets could then again be exploited to the full.

It is, of course, highly probable that for a considerable time at least, investment cannot be carried to the point of *full* investment in the Soviet Union. Up to date it has certainly not been carried that far by a wide margin. This is due partly to the fact that in the earlier stages of development she has experienced a marked shortage of capital goods. Thus the marginal product of capital has in fact been high—indeed, much higher than in the more developed countries of Europe and the United States. Moreover, even though the condition of severe capital shortage were overcome, it would still be true that for a long time to come the military requirements and the sorely needed minimum of consumer goods would preclude a volume of capital formation large enough to reach the point of "full investment".

Thus the outlet for investment in the Soviet system for the foreseeable future appears to be practically limitless. The outlet is large because Russia has still considerable distance to go before her stock of capital has caught up with the advanced countries. And taking a larger view of the matter, the outlet for investment can remain very large even after her greatly enlarged capital stock has driven the marginal productivity of capital down to the level of the western countries. This is true because investment in Russia need not stop at the point where the net marginal yield will cover the interest cost. Investment can, if the party leaders so decide, be pushed on to the point of "full investment".[2]

Under the American system, operating under present procedures and practices, investment cannot be pushed to the point of "full investment". Investment cannot be pushed beyond the limits imposed by the prevailing interest rate.

Here again something could be done about it if we were prepared to throw overboard outmoded conventional ideas. What is needed is a drastic and sustained reduction in the rate of interest.

It will at once be said that such a policy would produce a terrible inflation. This indeed might be true under certain conditions if no means were taken to check it. But there are powerful and effective ways of controlling inflation by means other than monetary. This is not the place to elaborate, but I hope to be able to do so in a forthcoming book. The answer would, of course, involve some considerable

2. Economists (Mises, Lange, F. M. Taylor, and others) seeking to apply the principles of marginalism, have sought to show that optimum use of resources requires that account be taken of the rate of interest not only in the allocation of capital to different industries, but also in the allocation of production resources to the output of capital goods in relation to the output of consumer goods.

departure from the concept of "business as usual". But we are not living in a "business as usual" world. Unless we wake up to that fact before long we may pay dearly.

IV

Finally, the Russians may succeed in maintaining a higher rate of growth because they are able to devote a *larger proportion* of GNP to growth than is feasible in the United States under existing mores and practices. The possibility that we may be unable to match their rate of growth of output capacity can in part be explained in terms of the manner in which American consumer wants and consumer values are influenced under the powerful sway of modern advertising. A not inconsiderable part of our production resources are wasted on "manufactured wants".

Social values in former times were inculcated into the social fabric primarily through education in the home, school and church. In the United States today, it is no exaggeration to say that the radio, television and movies are more important as educational media than the home, the school and the church combined. And the programmes as well as the commercials are largely controlled not by educators but by salesmen and advertisers. Under this tutelage, value standards inevitably fall to the lowest denominator. This is private enterprise at its worst. Private enterprise is wonderfully efficient in the production end, but it is not a good educator of social values.

Economists used to argue, and some still do, that the consumer in a free price system is entitled to what he wants, foolish though it may be. "Consumer sovereignty" was the phrase. This line of reasoning could indeed claim solid validity in the days of free and well-nigh perfect competition. But it is difficult to see how an economist who has been instructed in the theory of monopolistic competition can still adhere to the "consumer sovereignty" dogma. Nowadays consumers no longer act on their own free will. The demand curve is no longer the product of spontaneous wants. It is manufactured. The operating costs of modern corporations relate not merely to the *supplying* of wants but also to the *creation* of wants. The consumer is "brain-washed" into believing that this or that gadget is necessary if for no other reason than to keep up with the Joneses. Social values are created. One comes to feel that a longer, wider and lower car heavily weighted with chrome is more important than the education of one's children. Price comparisons are lost sight of when brand names become all-important. Controlled consumer tests, for example, indicate that one branded product which costs $182 is in fact superior to another which costs $232. Another at $89 is rated superior to one priced at $359. And so the reports go on and on with a long list of branded products. The process of consumer brain-washing has become a branch of psychoanalysis. Consumer wants are no longer a matter of individual choice. They are "mass produced".

"Consumer education" operates in two directions, each reinforcing the other. In one direction an immense effort is made to create social values which will build up a demand for gadgets and thus hold the line for established manufacturing capacity. We have reached a point at which American prosperity (so business journalists tell us) rests heavily on the continued output of 7 million cars per year. Citizens who are deeply interested in the crying needs that continue to go unsatisfied may perhaps be forgiven if they tend to view this situation as a kind of treadmill, a species of pyramid building.

In another direction, the various media of communication, including pronouncements by public officials (particularly in the Eisenhower Administration) are engaged in a powerful, and it appears successful, campaign to persuade the public that government expenditures should be reduced or at least not permitted to rise. Private expenditures are encouraged by all manner of alluring devices like consumer loans—trips to Europe with no down payment. But public expenditures are labelled as spendthrift and inflationary.

In the United States we have gigantic surpluses of some material goods. Farm surplus—partly political and partly technological in origin—we hear much about. But we also have other surpluses which advertising attempts to hide. Our stock of automobiles is so large that we could take the entire population—babies included—of the United States, the United Kingdom and West Germany out for a Sunday "buggy ride" with only five persons in each car. And even so we would not be using the idle stock of new and used cars piled up in dealers' inventories. The surplus reveals itself not merely in numbers but also in size, weight, and unused horsepower capacity. We could stop producing cars for five years and scarcely feel any pinch in automobile travel. The waste of resources that has gone into the leviathans produced in the period 1947-59 (in contrast with the more sensible 1947 models) could reasonably be set down at a figure of around 50 billion dollars.

At the same time, we have a great need for teachers, nurses and doctors, schools, hospitals, housing for middle and lower income groups, urban renewal, roads, resource conservation and development —all essential for vigorous and sustained growth. I do not wish to go into detail. The facts are well known. Yet funds for schools are voted down all over the country. We are confronted with a set of social values, artificially created, which block progress and growth.

The more pressure advertising succeeds, the more will we reach a point at which private spending plus necessary outlays for defence will together absorb so large a part of GNP that no room is left for public investment in schools, hospitals, housing, urban redevelopment, resource development, etc. We have already reached this point. The Administration at Washington drives this clinching argument home day after day. Having reached this point, public spending brings

inflation. To prevent inflation it is imperative to hold public expenditures to a bare minimum.

Conclusion

How might we be able to lift our historical 3 to 3½ per cent. rate of growth to perhaps 5 per cent.? I suggest that any such rate of growth is not likely to be reached or even approximated without a greatly enlarged role of the federal government. In particular I have suggested four lines of attack: (a) greatly increased public investment in both natural and human resources; (b) accelerated depreciation to encourage private investment; (c) low long-term interest rates designed to push investment closer toward "full investment"; (d) turn our modern media of communication into powerful instruments of public education thereby raising the standard of social values.

All four suggestions involve, as already noted, an enlarged role of government. Yet the first three of these programmes (and to some extent also the fourth) would induce increased private investment. Public resource development opens up private investment outlets. So also do accelerated depreciation and low rates of interest. And saner values with respect to social priorities would enable us to devote a larger proportion of our productive energies to those investments, both public and private, which ensure a more rapid rate of growth. Once again, the fear that public investment will supplant private enterprise does not appear to be well grounded. We already have a mixed public-private economy.

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THE BENEFITS AND COSTS OF PRIVATE INVESTMENT FROM ABROAD : A THEORETICAL APPROACH*

I

The benefits and costs of private investment from abroad are a matter of considerable importance for Australia. This paper suggests one possible method of analysing some general aspects of the problem. It is mainly theoretical and does not attempt to reach clearcut practical conclusions. This would require much more factual analysis and consideration of many other aspects. Some of these were discussed by Professor Arndt in "Overseas Borrowing—the New Model" (*Economic Record*, August, 1957), an article which also deals with many of the points analysed below.

The analysis is for the most part static and thereby ignores certain dynamic considerations that may be important. It attempts to assess the difference made to the real income of Australia at a given moment of time by the presence of more or less foreign owned private capital in the country, on the assumption that the economic forces involved have had time to work themselves out (the analysis is thus a long-run one). For ease of exposition this is done by starting with a given situation and then considering the effects of an increase in the foreign owned capital stock; the analysis could equally be applied to a reduction. The moment of time may be thought of as a number of years ahead, in which case we are considering the effects on Australian income at that time of a greater or smaller inflow of capital in the intervening period.

We shall consider only relatively small changes in the stock of foreign capital. This simplifies the analysis and seems legitimate provided one is not looking too far ahead. For differences in capital inflow are then unlikely to make a large proportionate difference to the foreign capital stock, or, *a fortiori*, to the total stock. It will be suggested later that, in real terms, the foreign private capital stock in Australia may have increased since the war by perhaps 6% per annum on average. If this rate were increased or diminished by, say, one-half, it would make a difference of only around 15% in the foreign capital stock in five years' time, and a much smaller percentage difference in the total stock—say 1½% if we make a rough guess that

* This article was written while the author was Visiting Professor of Economics and Finance at the Australian National University. I am grateful to several economists, including Professor T. W. Swan, Mr. H. P. Brown and Dr. W. E. G. Salter, for discussing these matters with me, and especially indebted to Dr. I. F. Pearce for his help.

the foreign owned stock is of the order of one-tenth of the total;[1] certainly the great bulk of the capital is still owned by Australians.

We start with drastic assumptions. The main ones, which will be relaxed as the analysis proceeds, are:

(1) the government maintains "full employment without over-employment" or, more generally, a constant degree of employment of Australian resources;

(2) no taxation;

(3) the size of the labour force is independent of the stock of foreign capital;

(4) the stock of Australian owned capital is independent of the stock of foreign capital;

(5) no external economies;

(6) constant returns to scale;

(7) perfect competition;

(8) more or less investment from abroad has no effect on the terms of trade;

(9) it creates no difficulties for the balance of payments which can be adjusted smoothly, and without cost, as required;

(10) the increase in foreign capital considered does not require changes in Australian policy that themselves may involve a loss to Australia.

II

The line GK in Diagram 1 relates the physical capital stock in Australia to the physical marginal product of capital, given the amount of other factors of production, which we shall call "labour". Initially the capital stock is AC, of which AB is owned by Australians and BC by non-Australians (called "foreigners" hereafter). Since, on our assumptions, profits per unit of capital equal the marginal product of capital, total profits are FEBA on Australian capital and EDCB on foreign capital. Output is GDCA so that labour gets GDF.[2]

Now suppose a small increase in foreign capital from BC to BL. Foreign profits become IKLB. The new foreign capital earns JKLC

1. This is only an illustrative order of magnitude based on various "back-of-the-envelope" calculations. For the sake of exposition it will be used on several occasions, but the general arguments would be unaffected if the true figure were substantially higher, say one-fifth, and true *a fortiori* if it were less than one-tenth.

It is hard to say whether the ratio of the *flow* of new foreign investment to total new investment since the war has been greater than the ratio of the *stocks*. The ratio of the flows has been quite high in certain sectors such as manufacturing.

2. This assumes that labour could not produce any output in the absence of capital. If it could, such output should be added to the amounts shown for both total output (GDCA) and total real wages (GDF). Since the subsequent argument would be unaffected, we have retained our assumption for simplicity of exposition and to avoid the use of mathematics other than geometry. See also footnotes numbers 8, 9 and 11.

and the "old" foreign capital loses EDJI because the marginal product of capital, and hence the profit rate, have fallen. Total foreign profits are almost certain to rise on balance because, for reasons to be given shortly, the "elasticity of demand for foreign capital" (as we shall call the percentage increase in the stock of foreign capital associated with a one per cent fall in its marginal product) almost certainly exceeds unity.

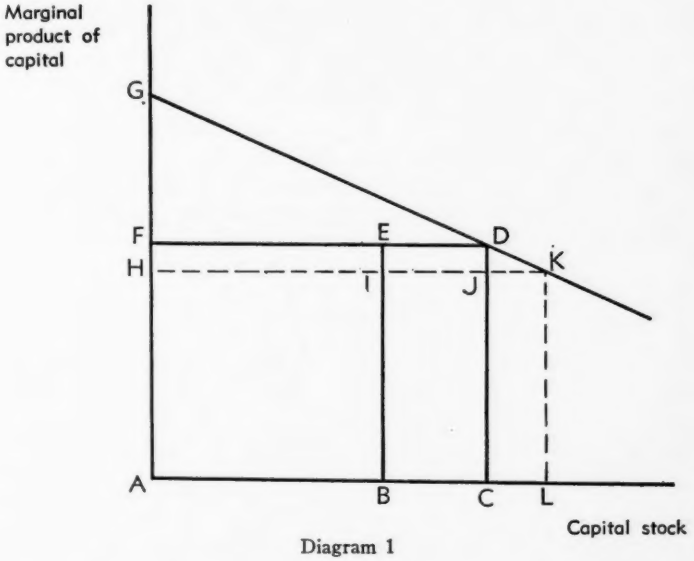

Diagram 1

Australian capitalists lose FEIH. Labour gains FDKH. Australia as a whole thus gains EDKI. Since DKJ is relatively small, Australia's gain is approximately EDJI, which is the loss of income on the "old" foreign capital. Australia does not, as is sometimes thought, gain the whole of FDJH, *i.e.* the whole of the increase in real wages resulting from labour's higher marginal productivity, but only a proportion corresponding to the ratio of foreign to total capital; the great bulk of labour's gain is merely a redistribution from Australian capitalists.

(Here, incidentally, we have one argument for restriction of foreign investment by the investing countries—which we shall call "Britain". Assuming no risk differential, British investors, if left to their own devices, equate the returns on home and foreign investments. But, while the marginal *national* (British) product on investment in Britain equals the private return, it falls short of this on investment in Australia to the extent of the reduction in profits on

existing British investments there—EDJI in the diagram.[3] This loss of profits goes to Australian labour, whereas the corresponding loss when there is more investment in Britain goes to British labour. If there is a difference in risk on investments in the two places—in either direction—the conclusion is unaffected provided British investors correctly evaluate the difference.)

Australia's gain (and Britain's loss) from more foreign investment in Australia is, however, unlikely to be at all large on our present assumptions. If total capital is of the order of 10 times foreign capital, the "elasticity of demand" for foreign capital will be about 10 times that for total capital (*i.e.* 10 times the elasticity of the curve GK at D);[4] and this latter elasticity is itself likely to be considerable because the substitutability of capital for labour is probably fairly high in Australia. The "elasticity of demand" for foreign capital is thus likely to be high, so that EDJI will be small in relation to JKLC. In other words, the great bulk of the extra output (approximately JKLC) will go to foreign capitalists; Australia's share will be small.

III

Now remove assumption (2) and allow for taxation. Suppose the rate of tax on foreign profits is t. This often approaches one-half where all profits are distributed, and we shall, for simplicity, use this fraction as an illustrative order of magnitude, though it should be borne in mind that it is on the high side.[5] Australia now gains, in addition to EDJI, the tax on the net increase in foreign profits, and this is likely to be a considerably more important gain. Put in another way, Australia now gains t(JKLC) plus, it is true, only (1—t)(EDJI) instead of EDJI, but this is a relatively small matter.

Taxation is not shown in the diagram to avoid complicating it. The case where the extra foreign capital is induced by lowering the tax rate will be considered in section XI; it is ruled out at present by assumption (10).

(We now have a much more important argument for restriction of investment by "Britain". Double taxation agreements are complicated things, but for our present purpose it is probably legitimate

3. If "Britain" is only one of a number of foreign countries with capital in Australia, and invests an additional CL there, the loss on her existing investments will, of course, be less than EDJI; part of Australia's gain will be at the expense of the other foreign countries.

4. If a 1% change in the marginal product of capital is associated with a change of x% in total capital, it will be associated with a change of 10x% in foreign capital if Australian-owned capital is constant.

5. If there is a tax on profits of 7/6 in the £ plus a withholding tax of 15% on dividends, the total rate of tax will be 47%. In fact, something approaching this rate seems to be fairly common, although some foreign profits are charged substantially less for various reasons; and if profits are undistributed the rate is also, of course, lower.

to assume that the British Treasury gets only the excess (if any) of the British rate of tax over the Australian rate, after the Australian Treasury has levied its tax in full. Now, if the British tax rate is the higher, British investors (ignoring differences in risk) equate the returns after the *British* rate of tax on investments in the two places, which means that they also equate the *gross* returns (before tax). But, while the marginal *national* (British) product is the gross return on investment in Britain (since Britain gets the tax), it is the net return, after Australian tax, on investment in Australia,[6] and this may be little more than half as great. If the Australian tax rate is the higher, the difference between the marginal national products equals tax at the British rate; the marginal national (British) product on investment in Australia may still be only about half that on investment in Britain.[7] These asides about "Britain" do not, of course, constitute a full analysis of the pros and cons of investment abroad from the point of view of investing countries.)

IV

Next remove assumption (3) and allow the size of the Australian labour force to be dependent on the amount of foreign capital. It is not unreasonable to suppose that immigration policy (and the supply of would-be immigrants) will be related in some way to the level of Australian incomes and these will be affected by the amount of foreign capital.

The gains from additional foreign capital so far described—there are more to come in later sections—will raise income per head if the labour force is not increased. It will thus be possible, if desired and if practicable, to increase population to some extent without reducing income per head below the "initial" level, by which we mean the level it would have attained in the absence of the extra foreign capital. (This could still, of course, be consistent with a rise in income per head over time.) It is impossible to say how immigration policy might in practice be related to levels of income and thus, indirectly, to foreign investment, but some highly simplified illustrations may be helpful.

6. For simplicity of exposition we ignore here the reduction in profits on existing British investments in Australia discussed in the last section.

7. Let r_a and r_b be the gross returns in Australia and Britain, and t_a and t_b the rates of tax. If $t_b > t_a$, British investors will make

$$r_b(1-t_b) = r_a[1-t_a-(t_b-t_a)] = r_a(1-t_b)$$

i.e. $r_b = r_a = r$ (say).

The marginal national (British) product is r on investment in Britain but $r(1-t_a)$ on investment in Australia, the ratio of the latter to the former being $(1-t_a)$.

If $t_a > t_b$, British investors will make

$$r_b(1-t_b) = r_a(1-t_a).$$

The marginal national (British) product is then r_b on investment in Britain but $r_a(1-t_a) = r_b(1-t_b)$ on investment in Australia, the ratio being $(1-t_b)$ which is still not much over one-half for many taxpayers.

Suppose that the extra foreign capital increased total capital by 1% (which would mean a 10% increase in foreign capital if this were one-tenth of the total). If then the labour force were allowed to increase by 1% there would, on our present assumptions, be an increase of 1% in total output, total profits and total wages above the initial level; the wage rate would be reduced again to the initial level, the profit rate restored to the initial level. Assuming no taxation, and no change in the number of Australian capitalists, the average Australian worker (including the extra immigrants) and the average Australian capitalist would then be as well off as initially, *i.e.* as they would have been had there been no increase in foreign capital and no consequential increase in the labour force.

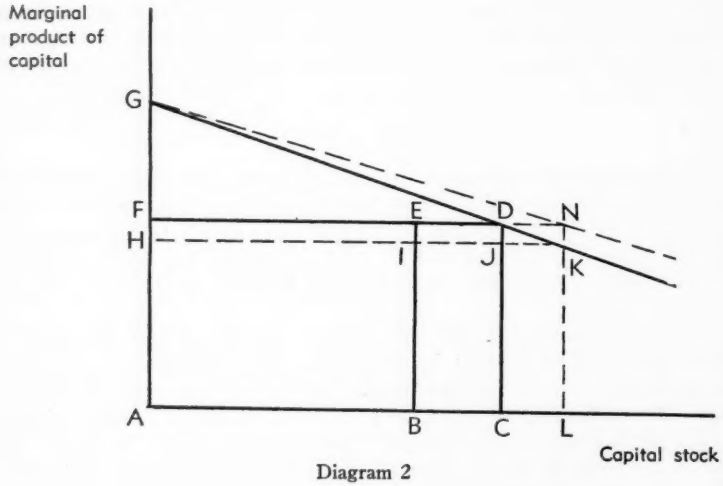

Diagram 2

The new position is shown in Diagram 2. (This is the same as Diagram 1 apart from the addition of the lines GN, DN, NK.) CL is 1% of AC. The 1% addition to the labour force has shifted the line relating the marginal product of capital to the capital stock from GK to GN. Compared with the initial position, total output is up 1%, from GDCA to GNLA; the wage bill is up 1%, from GDF to GNF; total profits are up 1%, from FDCA to FNLA.[8] Australian

8. If labour could produce some output with no capital (see footnote 2), this output would be increased by 1% as a result of the increase in labour. The wage bill and total output would still be up by 1%.

It will be noticed that the new marginal product of capital curve goes through G, as the old one did. This is obviously necessary for geometric reasons, if straight lines are used as in the diagram, to make the area under the curve increase by 1%; and it can be shown mathematically that it is generally true, given our assumption of constant returns to scale. (With some production functions, the marginal product curve will be asymptotic to the vertical axis.)

profits are FEBA, the same as they were initially. Foreign profits are ENLB, higher than they were initially in proportion to the rise in foreign capital.

If we allow for taxation the outcome will depend on fiscal policy. Since we are merely giving an illustration let us make the simple, though admittedly unrealistic, assumption that only profits are taxed and that the resulting revenue is used wholly to finance social services for workers. Since tax revenue from profits (Australian and foreign) will be 1% higher than it was initially, social services per worker will then be maintained at the initial level, as will profits after tax per Australian capitalist.

If the criterion for immigration were that variations in ~~foreign~~ foreign investment in such a way that variations in the latter should not affect the standard of living of workers or the average income of Australian capitalists, it would then be possible, given our present assumptions, to increase the labour force (compared with what it would otherwise have been) in the same proportion as the higher foreign investment increased total capital, *i.e.* by 1% in our example.

This would, however, reduce average income per head. Population would be up by 1% (we assume that Australian capitalists are also workers and that the labour force is a constant fraction of the population). But total income accruing to Australia would be up by less than 1% since total labour income would be up by 1% while total Australian profits were constant. This would be true whether we assumed (a) no taxation or (b) taxation of profits to finance social services with the latter counted as part of labour income and profits reckoned after tax. More generally, Australian income per head would be down whatever the nature of fiscal policy (provided that, as we are at present assuming, the tax rate on foreign profits is unchanged) because output would be up by 1% and foreign profits after tax by more than 1%, so that Australian income would rise by less than 1%, *i.e.* by less than population was increased.

If the criterion for immigration were that variations in foreign investment should not affect total income per head (and it may be worth repeating that this would not preclude a rising income per head over time), it would not then be possible to increase population by as much as 1%. But some smaller increase would be possible since, if there were none, income per head would be raised by the extra foreign capital.

Numerous other immigration policies are conceivable that would allow population to vary with investment from abroad. The policy actually chosen will depend on the relative importance attached to growth of population and of income per head; views on the distribution of income; fiscal policy; the supply of would-be immigrants; and so on. The question remains, however, whether more immigration resulting from more foreign capital would bring a gain of income to

Australia *additional* to the gains already described in sections II and III.

While this is highly likely it is not absolutely certain. For, though the extra labour would raise output in Australia, it would also raise the marginal product of capital and so foreign profits after tax, and possibly by as much as, or more than, it raised output; there would then be no further increase in total Australian income (including the income of the extra immigrants) or even a reduction of earlier gains.

To illustrate the possibility, consider the case depicted in Diagram 2. Compared with the position after the increase in foreign capital but before the increase in labour (with output GKLA), the increase in labour raises output by GNK but it also increases foreign profits, after tax, by (1—t)ENKI, and this could conceivably be as great as, or greater than, GNK.[9]

That an increase in Australian income is in fact very probable can conveniently be shown with the aid of a further diagram. The line SV in Diagram 3 shows the marginal product of *labour* corresponding to different amounts of labour, with the total capital stock fixed at the level reached *after* the increase in foreign capital. OP is the labour force initially. If it is now increased a little (by immigration) to OU, output goes up by WVUP (ignoring the small triangle QVW). The wage bill goes up from RQPO to TVUO, *i.e.* by WVUP minus RQWT. Total profits go up by RQWT, Australian profits by (1—c)RQWT — shown as RXYT — and foreigners' profits by c(RQWT) — shown as XQWY — where c is the ratio of foreign to total capital. Foreigners' profits after tax go up by c(1—t)(RQWT), *i.e.* by (1—t)XQWY. Total Australian income thus changes by WVUP minus (1—t)XQWY, *i.e.* by WVUP minus c(1—t)RQWT, so that it will increase if $\frac{\text{WVUP}}{\text{RQWT}} > c(1-t)$.

Now $\frac{\text{WVUP}}{\text{RQWT}}$ is the "elasticity of demand for labour" (as we shall call the elasticity of the amount of labour with respect to its marginal product, which equals the wage rate, *i.e.* of the line SV at Q).[10] If we call this elasticity e, the condition becomes $e > c(1-t)$. Now e is likely to be considerable, because the substitutability of labour for capital is probably fairly high, and almost certainly greater than c(1—t), which is of the order of $\frac{1}{10} \times \frac{1}{2} = \frac{1}{20}$. (An elasticity as low as $\frac{1}{20}$ would mean that, to employ 1% more workers

9. If labour could produce some output with no capital, the increase in output would be greater than GNK, but it might still be less than (1—t)ENKI. (See also footnote 8.)

10. If L is the quantity of labour and M its marginal product,

$$\frac{\text{WVUP}}{\text{RQWT}} = -\frac{\text{M}\,\Delta\,\text{L}}{\text{L}\,\Delta\,\text{M}} \text{ approximately.}$$

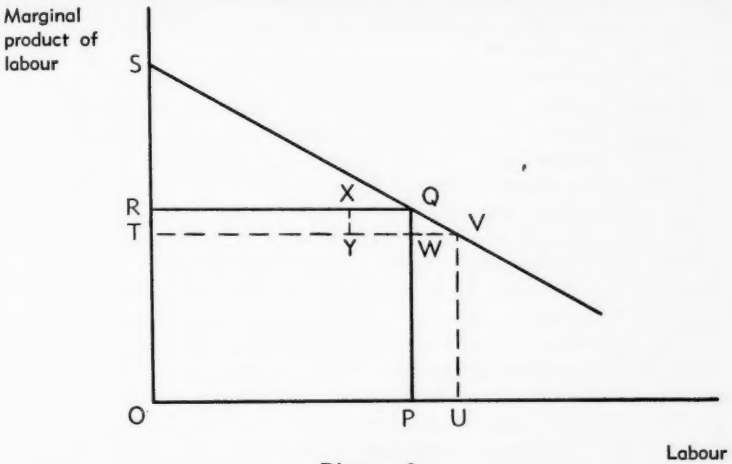

Diagram 3

—say 40,000—with a given capital stock, but allowing all the time necessary for long-run readjustments, the real wage rate would have to fall by nearly one-fifth.)

An increase in labour with capital constant is thus most likely to increase total Australian income. If extra immigration is allowed as a result of extra foreign investment it is thus most likely, on balance, to raise total Australian income beyond the level resulting from the gains described in sections II and III.

(It will be noticed that we have not relied in this section—as is sometimes done—on fixed technical coefficients, *i.e.* a fixed ratio of capital to labour, to show that more foreign capital will allow a larger labour force to be employed. The assumption of flexibility seems more realistic, especially as we are concerned with the long run and with the economy as a whole. The possible applicability of the analysis to "dual" economies in under-developed countries will be briefly touched on in section XII.)

V

Now remove assumption (4) that the stock of Australian owned capital is independent of the amount of foreign capital. The higher the stock of foreign capital at some future date, the higher must the inflow be between now and then, and the higher is the stock likely to be at most intervening dates. The higher, therefore, is Australian income likely to be in most intervening years, for reasons given in previous sections, if Australian owned capital is unaffected by the higher foreign investment.

This may suggest that Australian savings and investment are likely to be higher so that at the future date the stock of Australian

owned capital will in fact be higher. Such a conclusion, however, becomes considerably less certain when account is taken of such factors as the redistribution of income between capital and labour resulting from increased foreign investment and from any consequent increase in immigration; and it is hard to know how government fiscal, monetary and other policies will react to the changing circumstances—such reactions will be important. It is not inconceivable that Australian owned capital will be lower at the future date than it would have been in the absence of the extra foreign capital. To take an extreme, and no doubt exaggerated, example, extra investment from abroad might consist of purchases of existing Australian owned assets, and the proceeds might be spent on extra foreign consumption goods, of a type not obtainable at home, whose importation was previously prohibited but is now allowed following the improvement in the balance of payments; the extra foreign owned capital would then be fully offset by a reduction in Australian owned capital.

The actual outcome is hard to predict. If, as is perhaps most likely, Australian owned capital is increased, it can easily be seen, using the same type of diagrammatic analysis as before, that there will be a further increase in Australian income, over and above the increases described earlier, equal to the profits on the extra Australian capital plus the reduction in foreign profits, after tax, resulting from the lower profit rate. (The reduction in profits on the "old" Australian capital will be a gain to Australian labour.) If this higher income leads to more immigration, there will be a still further increase in total Australian income for reasons given earlier.

If Australian capital is reduced, Australian income will be less than it would have been (*i.e.* the gain for other reasons will be diminished) by the profits on the Australian capital not created plus the increase in foreign profits, after tax, resulting from the higher profit rate; and if immigration is in consequence reduced there will be a further reduction in total Australian income.

If Australia is prodigal enough to allow the extra foreign capital to be fully offset by a reduction in Australian owned capital (compared with what it would otherwise have been), then Australian income at the future date will, on our present assumptions, actually be lower than it would have been had the extra foreign capital not come in. For, assuming no change in immigration policy, total labour, total capital and total output will be the same as they would have been, but of this output foreigners will get an extra amount equal to the profits, after tax, on their extra capital; if, in the circumstances, immigration were reduced, there would be a further reduction in Australian income.

VI

Now remove assumption (5) and allow for possible external economies from extra foreign investment in Australia, *i.e.* economies

external to the foreign firms investing the extra capital. If the value added to output by this capital exceeds the profits, before tax, earned on it, the difference will be the value of such external economies. These will very probably bring a further gain to Australia.

We shall still assume that there are no external economies *of scale* resulting from the growth of the Australian economy generally; such economies will be considered in the next section. We shall be concerned at present only with external economies of foreign investment resulting from other factors such as (i) the breaking of bottlenecks (probably much less important now than it may have been in the early post-war years), and (ii) the introduction of "know-how" by foreign firms.

Such "know-how" is presumably becoming less important as Australian technical and administrative knowledge broadens. It is perhaps hardly worth mentioning that it can bring an additional gain to Australia only if it gets outside the foreign firms. This may happen where, for example, the latter train workers who are later employed by Australian firms or where the superior techniques they bring to the country are somehow passed on to locally owned businesses which are both made aware of them and forced to adopt them if they are to survive foreign competition. If any gain accrues to Australia from this "know-how" it does not necessarily mean that it might not have been preferable to buy or hire it without importing the capital.

While these external economies seem likely to bring an extra gain to Australia, they might conceivably reduce the gains mentioned earlier. The extra gain (which may be negative) will be equal to (a) the resulting change in the wage bill plus (b) the resulting change in profits of Australian capitalists plus (c) the tax on the resulting change in profits on the "old" foreign capital. If the benefit of the external economies spreads to both capital and labour—and this seems *a priori* the most likely outcome—(a), (b) and (c) will all be positive, and there must be a further gain to Australia. There must also be a further gain so long as labour benefits, even if capital loses; for, since the external economies will presumably increase output, labour's gain must exceed capital's loss, and only part of the latter is borne by Australia. There will still be a further gain even if labour does not benefit at all, provided there is no absolute reduction in the wage bill. But if there is an absolute reduction, Australia *may* lose.

Such a reduction might occur if, for example, the presence of extra foreign firms spread knowledge of production methods that enabled other firms to produce the same output with their existing capital but with less labour while the marginal product of labour at full employment was reduced. There would then, as a result of the external economies, be a higher total output in Australia but a lower wage bill. Profits would go up more than the wage bill fell.

This would, however, presuppose an improvement in techniques rather heavily biased towards labour-saving as opposed to capital-saving.

The possibility is illustrated in Diagram 4.[11] The external economies shift the marginal product of labour curve from the full to the dotted line. Output is up by E — C — B, which is positive. The wage bill is down by A + B. Profits are up by E + A — C.

Australia would, however, lose only if labour's loss was nearly as large as capital's gain. For she would get the great bulk of the latter, either in profits or in taxes, actually 1—c(1—t) of capital's

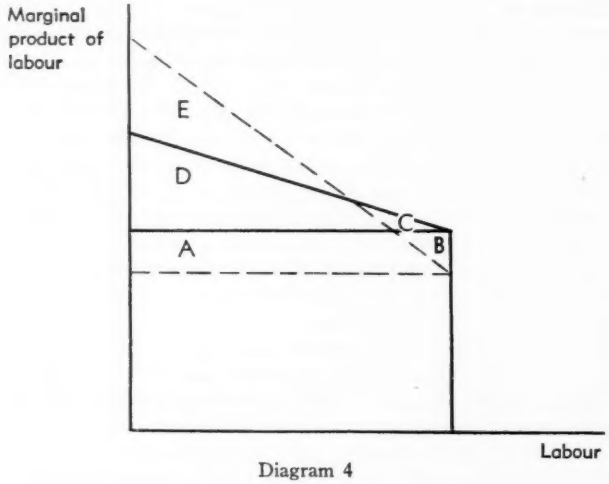

Diagram 4

gain where, as before, c is the ratio of foreign to total capital and t the rate of tax on profits. Taking c and t as of the order of $\frac{1}{10}$ and $\frac{1}{2}$, Australia would gain about $\frac{19}{20}$ of the increase in profits. She would thus lose only if labour's loss were more than about $\frac{19}{20}$ of capital's gain, *i.e.* only if the redistributive effect of the external economies were large compared with the gain in output.

Australia's loss could not, at worst, be more than about $\frac{1}{20}$ of labour's loss. While it cannot be proved that this would necessarily be small relative to the gains from foreign investment described above, it seems likely that it would be. It is hard to believe that an increase in foreign capital equal to, say, 1% of total capital could

11. It is assumed that capital could produce no output if there were no labour. This is analogous to the assumption mentioned in footnote 2.

change production methods sufficiently to redistribute more than say 1% of the national income from labour to capital. But this would reduce Australian income by not more than about $\frac{1}{20}$%, whereas it can be seen, by taking plausible figures, that the extra foreign capital might well increase Australian income by, say, ½% or more for reasons given in previous sections.[12]

In conclusion, it seems likely that external economies (other than economies of scale) resulting from extra foreign capital will further increase Australian income. There is no obvious *a priori* reason why the economies should be biased towards labour-saving rather than capital-saving; even if they were, they would reduce Australia's income only if they caused an absolute loss to labour, and a loss, moreover, that was nearly as large as capital's gain. Any loss to Australia would, in any case, probably not be large relative to the other gains from foreign investment.

Any gain from external economies would bring a further gain from extra immigration (given any likely criterion for immigration policy), and possibly from extra Australian capital; the reverse would be true of any loss from external economies.

VII

Now remove assumption (6) and allow for the possibility of economies of scale in the sense that, if labour and capital were both increased by 1%, output would increase by more than 1%, whether the extra capital were foreign or Australian. The economies of scale considered here do not, therefore, include any external economies resulting from the presence of more foreign, as distinct from Australian, capital; these latter economies could arise even if there were no increase in total capital or in labour, the extra foreign capital being offset by a reduction in Australian capital.

Economies of scale could be external to firms or internal; the latter type would be possible only under imperfect competition, about which more will be said in the next section. The economies could be biased in a labour-saving or in a capital-saving direction as in the case of the external economies described in the last section. They seem likely, however, to bring a further gain to Australia when foreign capital is increased. There could conceivably be a loss for reasons similar to those discussed in the last section, but this seems intuitively to be even more improbable, since a mere increase in scale seems less likely to cause drastic changes in methods of production than the presence of additional foreign capital, where the quantity of extra capital is the same in both cases.

Gains from economies of scale will, of course, allow further gains

12. Of course, if the external economies benefited foreign more than Australian capitalists in relation to their respective capitals, Australia's loss could be greater; but this would be inconsistent with our present assumption of perfect competition which means that the profit rate is the same for Australian and foreign capital.

from extra immigration (and possibly from extra Australian capital), and conversely for losses.

VIII

So far we have assumed perfect competition. It might be argued that this was a reasonable assumption on the ground that, according to some post-war studies, it corresponds fairly closely to reality in the long run, or at least more closely than many pre-war theories implied. If, on the other hand, we remove assumption (7), and allow for imperfect competition, the analysis becomes much more complex, and it is not easy to make useful generalizations about the modifications required in our previous analysis.

Assume first that the same "normal" rate of profits is earned everywhere. Wages plus "normal" profits will then exhaust the total output, but the reward per unit of capital or labour will be the marginal *revenue* product, which is the marginal *physical* product (assuming the firm expands) *less* this product multiplied by the reciprocal of the elasticity of demand facing the firm (where this elasticity is defined so as to be positive).[13] The *ratio* of the wage rate to the profit rate will still, however, equal the ratio of the marginal *physical* products of labour and capital.

If, now, growth took place wholly through multiplication of identical firms, and assuming no external economies, a given proportionate increase in both capital and labour would result in the same proportionate increase in the number of firms and in total output. There would thus be constant returns to scale for the economy as a whole. (The latent internal economies of scale implicit in our assumptions—according to a well-known theorem in the theory of the firm—would not be exploited.) It is intuitively plausible that each factor would then receive its marginal (national) *physical* product, even though it received less than what the marginal physical product would have been had individual firms expanded; a proof is given in the footnote.[14] On these assumptions, therefore, the preceding analysis

13. We assume a perfectly elastic supply of labour and of capital to the firm. Units of each product are defined so as to make their prices unity. The demand curve for each firm will be tangential to its average cost curve.

14. Let the production function of each of n firms be $y = f(k, l)$, where y is output, k capital, and l labour. Let Y, K, L be corresponding totals for the economy, π the profit rate, and w the wage rate. Suppose an increase in total capital sufficient to allow for an extra firm producing the same output as each old one and for the maintenance of the output of each old one. Part of the extra capital will go into the new firm and part into the old firms to compensate for the labour withdrawn for use in the new one.

The increase in total output is the output of the new firm which equals that of each old one,

$$i.e.\ \Delta Y = y \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Rewards to the factors exhaust output in each firm,

$$i.e.\ y = k\pi + lw \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

The increase in total capital is the capital in the new firm plus the increase in capital in all the old ones,

$$i.e.\ \Delta K = (k + \Delta k) + n\Delta k \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (3)$$

applies. It would also seem to be a reasonable approximation, even though firms are not identical, provided the new ones were representative.

If, at the other extreme, growth took place wholly within existing firms, each growing in the same proportion, the latent internal economies of scale would be exploited and capital and labour would get less than their marginal physical products. Extra foreign capital would then probably bring a gain to Australia as a result of the internal economies; for the profits it earned would be less than the extra output it created, the difference going to existing factors. This gain, however, is merely that resulting from economies of scale and already allowed for in the previous section.

On the above assumptions, therefore, imperfect competition does not seem to require much, if any, modification of our previous analysis. The assumptions are, of course, unrealistic. For example, in so far as the foreign capital creates new firms, these may, to get a foothold in the market, have to charge prices lower than those ruling for similar existing products that are in no way superior, simply because buyers are conservative in their habits. The new firms, if they used the same techniques, would then make a lower rate of profit than that earned elsewhere—there would no longer be the same "normal" rate everywhere—and there would be a gain to Australia additional to those already considered. The same might be true in so far as growth was within existing firms, for extra foreign capital would probably be concentrated on a small proportion of such firms, especially those in which foreign capital was already invested.

On the other hand, the growth of foreign firms might put them in a monopolistic position in which they could exploit Australian buyers, and this might involve a loss to Australia. (Foreign invest-

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There is no change in the output of the old firms,

$$i.e.\ \Delta k\frac{\partial y}{\partial k} + \Delta l\frac{\partial y}{\partial l} = 0 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (4)$$

The ratio of the profit rate to the wage rate equals the ratio of the marginal physical products of capital and labour (assuming firms were to expand),

$$i.e.\ \frac{\partial y/\partial k}{\partial y/\partial l} = \frac{\pi}{w} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (5)$$

From (4) and (5), $\pi\Delta k + w\Delta l = 0$ $\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$ (6)

From (1), (2) and (3), $\dfrac{\Delta Y}{\Delta K} = \dfrac{k\pi + lw}{k + (n+1)\Delta k}$

Substituting from (6), $\dfrac{\Delta Y}{\Delta K} = \pi\left[\dfrac{k\pi + lw}{k\pi - (n+1)w\Delta l}\right.$

Now $-n\Delta l$ is the labour in the new firm (being the sum of the transfers from the old firms) and therefore also the labour in each old firm in the new situation. In the old situation their labour (l) was $-\Delta l$ greater. Therefore $-(n+1)\Delta l = l$.

Hence $\dfrac{\Delta Y}{\Delta K} = \pi$, *i.e.* the profit rate equals the marginal national physical product of capital. Similarly for labour.

ment need not, of course, foster monopoly. On the contrary, it may break down local monopolies and, by accelerating the growth of the economy and so of the Australian market, widen the scope for competition by increasing the number of firms of reasonable size possible within existing industries.)

Endless further examples could be elaborated, but this would be pointless. The present method of analysis is admittedly unsatisfactory for dealing with imperfect competition, and a better method might substantially modify our earlier results. On the other hand, we have seen that, on certain assumptions, the perfect competition analysis gives a reasonable first approximation, and that the removal of these assumptions leads to modifications that do not all work in the same direction and may partly cancel each other out.

IX

Now remove assumption (8) and allow for possible effects of investment from abroad on the terms of trade. We still assume in this section that the balance of payments can be adjusted smoothly as required, so that international reserves are held constant without economic or social cost by, among other things, variations in exchange rates or in Australia's cost level relative to cost levels abroad with fixed exchange rates.

Let us start by also assuming, as is quite common in the analysis of such problems, (i) that trade barriers are not raised and lowered to correct tendencies to international deficit and surplus respectively; (ii) that an improvement in the balance of payments requires a worsening in the terms of trade, and conversely. On these assumptions, which will be critically reviewed later, extra foreign investment may affect the terms of trade in three main ways.

First, the transfer of the profits abroad will tend to require a worsening in the terms of trade to generate the necessary surplus in the other items of the balance of payments.

Secondly, the terms of trade may be affected by the increase in output and income in Australia resulting from the extra foreign investment, and by any consequent changes abroad (output abroad might, for example, be less than it would otherwise have been because there is now less capital for investment there). The outcome will depend on such factors as the pattern of changes, at home and abroad, in supply of, and demand for, different types of goods (especially export-type, import-type, and other). This raises very large questions that cannot be discussed here, but it seems that the terms of trade might tend to be either worsened or improved.

Thirdly, the movements of capital across the exchanges will affect the terms of trade. An inflow will tend to improve them, by creating a tendency to surplus in the balance of payments (which, on our present assumptions, has to be corrected), provided the capital does not reflect entirely additional imports of capital goods

and remembering that the government is assumed to maintain a constant degree of employment (otherwise we should have to allow for the inflationary effects of complementary Australian investment and the like). Similarly, the terms of trade will tend to worsen if and when the foreign capital flows out again. (This may happen even with direct investment if, for example, depreciation allowances are repatriated or if foreign assets are sold to Australians.)

It is hard to say whether, on balance, these various forces will improve or worsen the terms of trade. Fortunately, however, this does not matter too much, since any change is unlikely to be very large—once more for three main reasons.

First, it is rather widely believed that the terms of trade are to all intents and purposes a *datum* for Australia. The supply of imports must certainly be highly elastic since imports are such a small fraction of consumption of similar goods abroad; and, while one cannot be so confident about the elasticity of demand for exports, this, too, seems likely to be high in the long run we are here considering, especially when account is taken of competition between wool and synthetic fibres.

Secondly, even if the terms of trade are not a *datum*, deficits or surpluses may in practice be prevented, in part at least, by a raising or lowering of trade barriers which limits any worsening or improvement in the terms of trade.

Thirdly, even if trade barriers are not varied in this way, tendencies to imbalance may be largely corrected by other measures so that only small changes in the terms of trade are required. Dr. I. F. Pearce, in an interesting paper not yet published,[15] has argued that, assuming "full employment" is maintained at home and abroad, a country's balance of payments deficit, for example, can usually be removed in large part by (i) a cut in expenditure at home approximately equal to the deficit, together with a corresponding increase in other countries (which will be necessary to maintain full employment there as their surplus vanishes); (ii) a reduction, by exchange depreciation or otherwise, in the prices of non-traded goods at home relative to the prices of *both imports and exports*, and conversely abroad. These, in his view, are the important changes in relative prices necessary to restore balance. They will help to do so by stimulating production, and discouraging consumption, of both import-type and export-type goods at home, and conversely abroad. Any change in the ratio of import to export prices is, by contrast, likely to be relatively small. (He also reaches the somewhat surprising conclusion that any change in the terms of trade is equally likely to be in either direction; but whether this is a valid generalization, and whether it applies to Australia, are questions that cannot be pursued here.)

15. "The Problem of the Balance of Payments."

For all these reasons any gain or loss through changes in the terms of trade resulting from extra investment from abroad seems unlikely to be large. If there is a loss it is most unlikely to offset the gains already mentioned (this could, I think, be shown by an analysis broadly similar to one developed in another context[16]); nor does it seem likely to be as important as the losses that could arise for reasons given in the next section.

X

We now remove assumption (9) and allow for the balance of payments problems that may arise if Australia runs into substantial deficit. If exchange rates are fixed, reserves inadequate, and emergency overseas borrowing impracticable or undesirable, there will probably have to be (a) deflationary measures that will interrupt growth and cause unemployment of resources—we are here removing assumption (1)—except in so far as the deficit can be removed by eliminating excess demand; and possibly (b) intensified import restrictions that may cause shortages, disrupt production and investment plans, create rigidities in the economy and involve more than optimum protection (this may also happen if tariffs are raised). If the currency is devalued there will be social problems and a weakening of trust in the Australian pound. Moreover, devaluation may not quickly remove the deficit because, though trade may be quite highly responsive to relative price changes in the long run, it is much less so in the short run; deflationary measures and restrictions may thus have to be maintained for some time. Nor would freely fluctuating exchange rates solve the problem; and they have various disadvantages of their own.[17]

The question is whether extra investment from abroad might contribute to these troubles. The analysis required is quite different from that of possible effects on the terms of trade.

Let us assume for the moment that there are no large and rapid fluctuations in the flow of new investment. If then, with a given flow, the Australian balance of payments tends to improve over the years ahead with fixed exchange rates, an increase in foreign investment will not cause trouble by swelling the profits that have to be remitted across the exchanges, provided the increase is not too large. If, on the other hand, the balance tends to worsen with a given flow of investment, recurring crises will in any case be likely. Extra foreign investment would not necessarily then aggravate them; it might alleviate them. The higher payments of profits abroad might be offset, or more than offset, by the higher capital inflow and by favourable effects on the balance of payments resulting from the extra production; for this might be what is sometimes called "import-saving" or

16. MacDougall, *The World Dollar Problem*, Appendix XIIF.

17. For a fuller discussion by the present author see, *e.g.*, *op. cit.*, pp. 335-42, 383-7, and "Flexible Exchange Rates", *Westminster Bank Review*, August, 1954.

"export-creating".[18] Extra foreign investment might, however, aggravate the problem, especially if it were "import-creating" or "export-discouraging". There could then be more serious and more frequent crises, and the resulting losses would have to be debited against the gains from extra foreign investment described earlier.

One convenient method of assessing the future trend of the balance of payments, given fixed exchange rates, is to consider first the likely course of the Australian price level relative to price levels abroad (*i.e.* the comparative rates of inflation, if any), and secondly any "structural" changes that might affect the balance of payments even if price levels at home and abroad moved in line. It is possible to be pessimistic or optimistic on both counts. No judgment is attempted here but, if one were only moderately optimistic, it would not seem that a continuation of something like the post-war rate of growth of private foreign investments in Australia during, say, the decade ahead would obviously cause trouble.

An uncritical interpretation of the crude figures may exaggerate the past rate of growth. They suggest that between mid-1947 and mid-1958 the value of direct foreign investments outstanding rose by an average of 15% a year.[19] A more careful examination substantially alters the picture. First, the crude figures include undistributed profits of subsidiaries only since 1947; if those accumulated earlier were added, the rate of growth might be reduced to perhaps 13% a year. Secondly, and much more important, it seems that a large part of the increase merely reflects the fall in the value of money (both between 1947 and 1958 and before 1947; for the fixed assets existing at mid-1947 were all installed before that date). A very rough (but complicated) calculation, based on a method used in another context,[20] suggests that the rate of increase of direct investments, in real terms, may have been only about 6% per annum. While not much significance can be attached to this result, a check on its plausibility is that, in money terms, income on foreign investments in Australia (excluding public authority interest) rose from about 1·1% to about 1·3% of the gross national product during the same period.[21]

18. The correct meaning of these much-abused terms varies with the context. Here we are really combining them and postulating that, apart from the capital inflow and the additional profits payable abroad, the extra investment is "balance-of-payments-improving", given fixed exchange rates. To determine whether this was likely we should have to assess (a) any effects on Australia's price level relative to price levels abroad, and (b) any "structural" effects on her trade (see next paragraph); these would comprise the effects of faster growth generally (whether financed by foreign or Australian capital) and of any special twist given by the foreign capital to the pattern of development. As is well known, such an assessment is difficult, not least because the indirect effects can be so important.

19. Including undistributed profits of subsidiaries since mid-1947. Calculated from tables 5, 6, 8, 9 of *Annual Bulletin of Oversea Investment, 1957-58*.

20. MacDougall, *op. cit.*, pp. 534-5. There is no space to describe the calculations for Australia, and little need since the result is purely illustrative.

21. Calculated from papers on *National Income and Expenditure*; adjusted for annual fluctuations. The figures are not quite comparable with those given earlier.

This is not inconsistent with investments outstanding rising by 6% a year in real terms and the real national product by, say, 4-5%.

If, in future, foreign investments grew at 6% a year in real terms (one can admittedly make more startling extrapolations by taking U.S. and U.K. investments separately[22]), the growth of income on them would not obviously be embarrassingly rapid in relation to the growth of trade; for, with the real national product growing by, say, 5% a year, trade may well tend to grow by, say, 4% in real terms (there may be reasons why it will grow more slowly than the national product, but the difference is unlikely to be very great). Since profits on foreign investments in Australia are still quite a small fraction of trade in goods and services, imports would not have to rise so very much more slowly than exports to cover the growing income payable abroad, even if we ignore the growing support to the balance of payments that would result from the rising inflow of new capital.[23]

If we now remove the assumption of no large fluctuations in this inflow, there is the possibility that these might help to cause crises, especially if a sharp reduction in the net inflow (allowing for withdrawals of foreign capital) coincided with a worsening in the balance of payments for other reasons. The higher the average flow over a period of years the more serious is this danger likely to be, and this is a further cost of more rather than less investment from abroad. (The extra danger would, however, be diminished or removed if more investment resulted in an improved balance of payments, and a building up of reserves, either automatically or through deliberate policy.)

It is not obvious that the inflow of private capital will become a dangerously high fraction of the balance of payments in the foreseeable future. It has averaged only about 10% of payments on current account in recent years (including undistributed profits),[24] and we have seen that it will not grow so very much faster than trade if the post-war trend continues. Nevertheless, the net inflow can contract sharply—it fell by over two-thirds between 1951-52 and 1952-53 and might even become negative—and a loss of even, say, 7-10% in foreign exchange receipts can be embarrassing when reserves are low, especially if other receipts are falling at the same time.

Direct investment may be less dangerous in this respect than portfolio investment in Australian companies, since the latter is probably more volatile. (It also brings little, if any, "know-how", one of the main gains from direct investment; and, though the rate of return on it may appear lower, this becomes less certain if allow-

22. See Arndt, *op. cit.*, p. 258.

23. The relationships between growth of trade, foreign investment, and income on it could be further elaborated, but this seems unnecessary for our present purpose.

24. The balancing item is excluded; see R. J. Cameron, *Economic Record*, August, 1957, pp. 263-4.

ance is made, as with direct investments, for the undistributed profits being set aside for the benefit of shareholders.)

XI

Finally, let us remove assumption (10), that the increase in foreign capital considered does not require changes in Australian policy that themselves may involve a loss. The previous analysis would require no consequent modification if we were considering the effects of changing conditions abroad, say a fall in the rate of profit there that encouraged the flow of capital to Australia. But if, say, the government were considering whether to provide more information abroad about investment opportunities in Australia, the cost of so doing would have to be debited before striking a balance. Attempts to attract foreign capital by firmer guarantees on freedom to repatriate might increase the danger of future balance of payments difficulties. Higher protection, designed to encourage investment in Australia by foreign producers thereby prevented from exporting direct, might mean sacrificing some of the benefits of the international division of labour; there might also, of course, be further well-known benefits from higher protection, but some of these have already been allowed for in this paper.

Conversely, measures that might reduce capital inflow, such as insistence on a minimum Australian participation in the equity of subsidiaries of foreign firms or the outlawing of restrictions on exporting by such subsidiaries,[25] might bring other economic or political benefits.

The only case we shall consider in any detail is where investment from abroad is encouraged by a reduction in tax rates on foreign profits, whether or not this applies equally to domestic profits. (The analysis will, of course, apply in reverse to higher tax rates.) If rates are reduced, the gain from taxation will be smaller than that described in Section III. There could even be a reduction in tax revenue from foreign profits.

It can easily be shown that this will be avoided if $\frac{\frac{1}{\eta_d}+\frac{1}{\eta_s}}{1+\frac{1}{\eta_s}} \leqslant t$

where t is the tax rate as before and η_d and η_s the elasticities of demand[26] for, and supply of, foreign capital; they measure the relationship between changes in the *stock* of foreign capital in Australia and in the profit rate, before tax in the case of demand, after tax in that of supply. If we took the tax rate as one-half, this would

25. Cf. H. W. Arndt and D. R. Sherk, "Export Franchises of Australian Companies with Overseas Affiliations", *Economic Record*, August, 1959.

26. Defined so as to be positive.

reduce to $$\eta_s \geqslant \frac{1}{1-\frac{2}{\eta_d}}$$

If, for example, η_d were infinite, 10, 4 or 2, η_s would have to be not less than 1, $1\frac{1}{4}$, 2 or ∞. We have seen that η_d is probably high, so that a fall in tax revenue might be avoided if the elasticity of supply of foreign capital were not less than, say, some figure between 1 and 2.

It might be thought that this was highly probable since foreign capital in Australia is such a tiny fraction of foreign capital abroad. But the market is very imperfect; only a very small fraction of all foreign capitalists are interested in investment in Australia. An elasticity of supply of, for example, $1\frac{1}{2}$ would mean that, if the rate of profit, after tax, on foreign capital were, say, 9% rather than 8%, this would in the long run make a difference of nearly one-fifth, or perhaps £250 million or more, in the amount of foreign capital in Australia. Whether this is likely it is very hard to say.

It certainly seems possible that, if investment from abroad were encouraged by tax remission, there would be no gain to Australia from increased tax revenue, at least if we confine our attention to the stage of the analysis reached in Section III. The reduction in tax rates might still be worth while, for the other consequences might be favourable to Australian income on balance (and might possibly convert a tax loss into a tax gain). But it should be remembered that any gains from higher immigration, and possibly more Australian capital, would now be substantially smaller than in our previous analysis, because they there depended considerably on the rise in Australian income resulting from higher tax revenue from foreign profits.

XII

The main conclusions of this analysis are fairly straightforward and obvious. The most important direct gains to Australia from more rather than less private investment from abroad seem likely to come through higher tax revenue from foreign profits (at least if the higher investment is not induced by lower tax rates), through economies of scale and through external economies generally, especially where Australian owned firms acquire "know-how" or are forced by foreign competition to adopt more efficient methods.

These gains may permit higher immigration, which will further increase Australian income, if immigration policies are related in some way to the standard of living. They may also lead to higher domestically-financed investment, which will later increase Australian income still further, but this is problematical and depends considerably on government policy; if domestically-financed investment were allowed to fall when more foreign capital came in, Australian income

could actually be lower at some future date than it otherwise would have been.

The effects of extra foreign investment on the terms of trade, which might be favourable or unfavourable, are unlikely to be large. The effects on the balance of payments could be more important. They could be favourable, but the danger of future balance of payments crises might be increased; for there are inevitably fluctuations in the net inflow of private capital, and part at least of the foreigners' profits have to be transferred across the exchanges.

These are some of the results obtained by applying rather conventional tools of economic analysis. The assumptions used are still highly simplified even after those listed at the beginning of the article have been removed. For example, allowance is made for only two factors of production. No distinction is made between fixed interest and equity investment. No explicit account is taken of government owned capital or of government borrowing from abroad; throughout most of the paper these are implicitly assumed to be independent of changes in private investment from abroad. The analysis, as was emphasized at the outset, is mainly static. Even if it were made more dynamic it would still fail to take account of considerations not allowed for in most economic theories and about which the economic historian, for example, might have more useful things to say. Many aspects of the problem are left uncovered, such as the relative merits of government borrowing and private investment from abroad, and little is said about short-run implications. No attempt is made to assess the political costs and benefits.

The analysis will not apply to countries other than Australia without modification, but such modification may sometimes be possible. In many under-developed countries, for example, there may be heavy unemployment of labour, or under-employment where the marginal product is far less than the wage rate, and marginal product, of labour in the organized sector, or perhaps even zero. The foregoing analysis might then perhaps be adapted by considering the organized sector and assuming employment in it to be as great as was feasible at a given real wage rate; more investment from abroad would then make possible more "immigration" from the unorganized sector just as, in section IV, we allowed for the possibility that it might permit more immigration into Australia from overseas.

Despite its many limitations it is hoped that the analysis in this paper may be of some relevance, at least to Australia, and that it may provoke others to correct and improve it and to explore other aspects of the problem.

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RELATIONS BETWEEN CIVIL SERVANTS AND MINISTERS IN POLICY MAKING*

I

This article, with a few not considerable changes, is as prepared for the A.N.Z.A.A.S. Congress at Perth in August, 1959. Its aim was to review and supplement what I had said in an address to the Institute of Public Administration in Canberra in 1954. The title of that address was "The Role of the Permanent Head".[1]

It is important to stress the origin of the 1954 talk. It arose directly out of a challenging question: "Do civil servants make policy?" The question rather surprised me then until I realized that, in practice, the distinction between *policy* and *administration* was not so clear-cut as it had seemed to me to be in the mind and exposition of Professor F. A. Bland when he first instructed me in the subject in 1929 (at Sydney University). The text-book of that day was Leonard White : *Public Administration*. Even as late as 1955 White still defined administration as "all those operations having for their purpose the fulfilment or enforcement of public policy". White recognized but evaded the question whether administrators shared in policy making.[2] In this field—at least to my inexperienced ears in 1929—the distinction made between policy and administration clearly separated the decision makers, Ministers, from their doers, the civil servants. By 1954 I was not able so readily to separate them in policy making activities.

It was this discovery that caused me hurriedly to examine the later text-books. These reinforced my doubts and I quoted them

* This paper was not written to meet the occasion of this special number of *The Economic Record* in honour of Sir Douglas Copland. Yet it has, nevertheless, seemed to me to be an appropriate salute to his own considerable direct contribution both to the experience and prestige of the Commonwealth Public Service, and to the training of administrators. Indeed, there is a striking similarity between the views put forward here and those recently expressed by Sir Douglas in an address given to the Fifth National Management Conference in Brisbane and published (in part) in *Management Digest*, June/July 1959.

In arguing for an expansionist economic policy and a clear recognition of their goals on the part of policy makers and administrators, Copland said: "The administrator, whether in Government or private enterprise, does not necessarily make the fundamental decisions. He is in the front line of development, and he can exercise a great influence upon those who have the responsibility for policy making. . . . Indeed, it might well be said that the ultimate decision on the course Australia or any other country will pursue will depend largely upon the quality of its administrators." It is fitting that Sir Douglas should play such a dominant part in developing the means of training administrators. I believe my own experience of which I have written in this paper certainly gives strong support to the need for able administrators in both public and private enterprise.

1. See *Public Administration*, September 1954. (Hereinafter called "1954 Address".)

2. See 1926 edition, p. 2.

extensively in my "1954 Address". At Perth I cited some more.[3] Allow me to quote two, one British and the other American, both getting very close to my view of the role of the senior civil servant and his part in the process of government.

The first is from Jennings:[4]

> "Moreover, the Minister has at his hand the services of the permanent head of his department who 'is not (except by accident) a specialist in anything, but rather the general adviser of the Minister, the general manager and controller under the Minister, with the *ultimate* responsibility to the Minister, for *all* the activities of the department (and of its officials)'. This distinguished civil servant has usually had experience outside his present department. He has, usually, none of that deference to experts which most Ministers possess. He is able to put before the Minister the possible alternatives, to select the weak points in the specialist's case, and to give his own opinion of rival theses."

The second is from York Willbern:[5]

> "The traditional distinction between policy and administration was in many respects a comforting one for bureaucrats. The governmental world was divided between politics and non-politics, and the professional administrator occupied the more serene and protected waters. . . . It was greatly disquieting, with more ramifications than we have yet admitted, when our examination led us, in many cases rather reluctantly, to the conclusion that much policy is being made . . . within administration. . . . Civil servants then become part of the process of *government*, not just of *administration*. Many civil servants are still not aware of what this change in perception means; they prefer the more comfortable position of neutral competence, and protest greatly when they are propelled conceptually into a new role."

In short, civil servants are not merely doers: they are part of the complete *process* of government including the task of making policy decisions. This was my view in 1954; added experience since then has amply confirmed my position.[6]

Nor is the statutory position of a Commonwealth civil servant inconsistent with this. Under the Public Service Act (section 25(2)): "The Permanent Head of a Department shall be responsible for its

3. These were presented as an annexe to the Perth paper, and are not reproduced here except for two or three used in the text.

4. Jennings, *Cabinet Government*, 2nd ed., p. 111. The internal quote is from a memorandum by Sir Warren Fisher (Permanent Secretary to the Treasury): Royal Commission on the Civil Service (1929).

5. York Willbern in Editorial (p. ii) of *Public Administration Review*, Autumn, 1957. The *Review* is the Journal of the American Society for Public Administration.

6. It will be apparent throughout the paper that my conclusions derive very much from my own experience. I believe most of them are capable of wide generalisation, but the reader needs to exercise care in this.

general working, and for all the business thereof, and shall advise the Minister in all matters relating to the Department." The Minister is responsible through Cabinet to Parliament; the Permanent Head is in effect the General Manager of his Department. A Permanent Head will normally arrange for several officers to carry management responsibilities over Divisions and to have advising functions in relation to the Minister. Nevertheless his is the final responsibility to the Minister for the operation of the Department and for stating to the Minister the Departmental view on policy questions.

I have so far avoided defining the term "policy making". It is the making of the *decision* which is administered. The Oxford Dictionary defines policy as "a course of action adopted by government". For our purposes we can follow J. E. Hodgetts[7] in calling policy formulation the exercise of choice leading to "a settled or definite course or method adopted or followed by a governmental agency or a public official". This is not an essay in precision, and we will have to live with the main difficulty in this definition. A policy decision can be in the broadest terms—*e.g.*, whether or not to impose import restrictions—or in quite narrow compass—*e.g.*, whether to issue a particular person with an import licence. The charge sometimes made that bureaucracy exercises too much power often stems from the fact that particular decisions of this kind are made without formal reference to Ministers. I propose to show that such decision making is inevitable, but that it is therefore important to ensure that particular decisions are made within a framework of known and approved policies—that is, that a licence is given or refused for explainable and approved reasons, not merely at the whim of the civil servant. However, this is to anticipate. Moreover, I need to stress that my concern in this paper is with the civil servant's role in the making of policy decisions not only of the narrow kind but rather more significantly of the widest and most general kind, too.

II

The first and major thing I said in the "1954 Address" and quite strongly re-affirm in the light of five years' added experience, was that civil servants do participate in policy making and even initiate policies. I certainly inferred then that the initiative could and did lead to policy decisions adopted by the Minister or Ministers. I realize today that in some narrow but not unimportant fields it is possible for civil servants to initiate and carry through policy decisions sometimes without formal clearance by Ministers. I will argue that the very complexity of economic policies (*e.g.*, import licensing) probably makes this risk almost inevitable, and that, because of this, some system of checks is of great importance. For the nonce, however,

7. J. E. Hodgetts: "The Civil Service and Policy Formation", *Canadian Journal of Economics and Political Science*, November, 1957, p. 469.

let me keep to the broader issues of policy of which I gave several illustrations in 1954.

The examples then used included the making of a new Commonwealth agricultural policy announced in 1952; International Wheat Agreement; domestic wheat stabilization; the request by U.S.A. in 1950 that we suspend wool auctions; and Japanese pearling. These examples from the work of the Department of Commerce and Agriculture had removed any doubt from my mind that at least in one Department senior officials had participated in policy making. I felt then—and still do—that a wider generalization was in order. The relations between officials and Ministers in thinking through the problems were so close and continuous in these examples that who began what hardly mattered. In all cases, however, civil servants were the advisers only. In none of them was there the slightest evidence of any usurping of Ministerial prerogatives or final responsibility for the decisions made.

That officials do participate in the process of policy making has been amply confirmed by experience since in the re-negotiation of the Ottawa Agreement; the review of trading relations with Japan; the overhaul and re-shaping of import licensing policy; and the attempt to amend the rules of G.A.T.T. more to our liking—to name only four major questions of the last five years. I believe it no less true about these examples than the earlier ones that Ministerial responsibility and oversight have been well protected.

Another thing I said in 1954 was that "there is no need to pretend that any Minister's relations with his Permanent Head can be stated satisfactorily in terms of formal rules of administration".[8] I have no reason to change this view. Nevertheless, it is important to stress the mechanics of that relationship: there must be some kind of informal machinery which enables a complete and continuous interchange of ideas among senior officials in a Department and between them, on the one hand, severally and collectively, and the Minister on the other. The mechanics will vary according to personalities of Minister and Permanent Head—the final sieve for what goes to the Minister[9]—but interchange of ideas there must be. Good working relations are easier to establish if a Minister holds office for a period of not less than three years.[10]

My experience has principally been with a strong Minister over a decade. All sorts of theoretical results can be conjured up (and

8. "1954 Address", p. 157.

9. Cf. Jennings: *The British Constitution*, p. 124: "The Secretary . . . exercises general control, he has the last word on proposals that come from a Minister". The practical position must be more open than this: the Minister must have direct dealings with several officers. Nevertheless, the Secretary needs to know what ideas his senior officers send or take to the Minister so that he may intervene if he wishes. Cf. "1954 Address", *op. cit.*, p. 162.

10. This is not to be read as necessarily approving very long periods in office. Long entrenchment in office may have dangers as well as advantages. On these I need not enlarge here.

some realized in practice too) by taking differing combinations of weak or strong departmental officials with weak or strong Ministers and long and short periods of office. As I argued in 1954, however, Cabinet does and must act as a sorting-out point. Except in the unlikely event that Cabinet is dominated as a whole by civil servants, there is at this point a brake on the apparent ability of strong civil servants to push their will against the views (or lack of them) of a weak Minister. The topic opens up fascinating but not necessarily profitable possibilities for discussion. I am content to assert that in forming and administering economic policy the preservation of an effective Ministerial responsibility demands Ministers who ask "why" and "why not" and a Cabinet which in turn insists on the answers to these same two questions. A bureaucracy charged with advising on and administering legislation in difficult fields of policy cannot be blamed for appearing to be strong and dominating if its Ministers do not themselves act as critical and final arbiters on policy questions.[11] A close integration of "appointed officials and elected Ministers" in making and reviewing policy is a sheer necessity today;[12] but not the abrogation of Ministerial responsibility for the broad courses of action decided upon. "Civil servants may be statesmen in disguise, but they must not be Ministers in disguise."[13]

I think we can agree that today's civil servant has become the "statesman in disguise" as covered by the Oxford Dictionary definition of statesman—"one who takes a leading part in the affairs of a state or body politic, especially one who is skilled in the management of public affairs". It is open to debate whether our civil service is so well equipped that we can accept as widely evident Wheare's more flattering addition to the meaning of "statesman in disguise": "Those qualities of wisdom, vision and imagination which most of us associated with statesmanship."[14]

Indeed, while the civil servant is no longer the unseen and unheard clerk of the 19th century, he is still "encouraged to think of himself as mainly a 'practitioner of means', working out of the limelight and anonymously to put into effect policies decided by others, on which he may have offered advice, and which may leave him scope for considerable discretion, but which he should not consciously distort in response to other viewpoints and pressures".[15]

11. In British writings the power of "questions in the House" as a check on Ministers and officials is much stressed. Questions are with notice, but the supplementaries do force a Minister to know his subject. Questions are without notice in Australia and in answering a good Minister will reveal his competence. Even so, question time in Australia has never seemed to me any more than a partial stimulus to tidy and correct behaviour on the part of Ministers and their advisers.

12. See Hodgetts, *op. cit.*, p. 470.

13. K. C. Wheare: *The Civil Service in the Constitution*, 1954, p. 29.

14. Wheare, *op. cit.*, pp. 26-27. The term "statesman in disguise" was used by Sir James Stephen, former civil servant and Cambridge Professor, writing his comments in 1854 on the Northcote-Trevelyan Report of that year. See Wheare, p. 19.

15. Spann in *Public Administration in Australia*, 1958, p. 43.

This is fair comment, but the senior civil servant is more than merely a "practitioner of means"; his advice about the ends of policy may be quite powerful. Unfortunately, too, in relation to Spann's comment, there is an increasing appearance in the public limelight of senior officials. This is understandable of members of statutory boards; it is less easy to explain and handle with regard to the departmental heads and their senior officials. This, too, is a point for some more discussion later.

As I am now beginning to explore ground not really covered in my 1954 address, it is time to outline the balance of this paper. I propose to venture comment on four or five substantial points:

(a) A little more on my reference to integration of the policy making functions of a Minister and his officials.
(b) Something on the importance of seeing departmental policy as a whole.
(c) The need for great care in relation with the public—
    (i) in making policy; and
    (ii) in carrying out policies.
(l) A tentative remark or two about ministerial responsibility.

III

On the integration of officials and Ministers in their working relation I have only a little to add.

I have said that the senior civil servant as adviser is not merely a "practitioner of means"; nor is he a "Minister in disguise". Yet he is not very useful to his Minister if he is a "yes man". I take a statement by Mr. Hasluck, out of context but validly in this connection: "If any attempt is made to exercise close control over a department in such a way as to make a department the acquiescent echo of a Minister's will, the Service is being debased".[16] On the other hand, the Permanent Head has the obligation of the security he enjoys to maintain his intellectual integrity and to make sure that his Minister's policy views are subjected to critical but friendly and constructive analysis.[17] On the other hand, having done his best to persuade his Minister that a proposed line of action is wrong, a Permanent Head must carry out that policy loyally and as efficiently as possible. If he cannot do this a difficult situation can arise, one which might well lead to a change of position, preferably by agreement.

It is fair to say that the position does not seem to arise as often as one might expect. I have sometimes wondered why and doubt if I really know the answer. Perhaps it is simply because civil servants are so thoroughly ingrained with the tradition of impartial and loyal service that clashes with Ministers only arise when personalities and temperaments are quite incompatible. It could be that the problem

16. Quoted by R. G. Menzies. *Parliamentary Debates*, Vol. 193, pp. 178-9.
17. "1954 Address", *op. cit.*, pp. 164-5.

is one not so likely to have arisen in the simpler economic days of pre-1939 as it may arise in the future. Certainly mutual trust and respect between a Minister and his senior advisers is desirable.

Post-war experience gives some ground for comfort. It has come to be recognized more clearly during the war and since that the field of economic policy is so complex that no Minister can really operate with any pretence at leadership without the closest working relations with his advisers. His is the final responsibility for adopting an idea to put to Cabinet and perhaps thence to Parliament; the testing and shaping of that idea requires a mingling of thought and discussion with his advisers as well as with his Ministerial colleagues. The very necessity for this is perhaps one reason why in this field of policy making the senior officials are no longer so unknown to the public as they were. They are tending to become identified with Ministerial thinking and sometimes the thinking of particular Ministers at that. This can lead, as the recent Canadian case has shown, to something of a mental barrier between officials and new Ministers if these new Ministers with new ideas come to power after a long period in opposition. For this reason it is important again and again to stress that civil servants are trained to serve Ministers with impartiality. They must identify problems and discuss policy courses with integrity against the background of the known philosophies of the elected authorities. It is good to know that the Canadian service has come through a test after twenty-two years of Liberal Government with fewer casualties to tradition than was perhaps expected.

It was comforting, too, to have Lord Attlee's clear testimony that the United Kingdom civil service was completely loyal to its traditions of impartial service when Labour took office in 1945.[18] There is no reason, despite one case sometimes cited to the contrary, to suggest that Australian experience has been or will be significantly different.

I say "comforting" to all this despite some strong arguments for moving nearer to American practice. It is certainly a great help to a Minister if he can, on coming to office, choose his own Permanent Head. Moreover, if antipathies and antagonisms develop, or if the Minister loses respect for the integrity of his adviser, a change should be made. Yet continuity at the top end of a department has tremendous advantages. In dealing with economic problems a Minister is fortunate if he can draw on a well of experience—provided his policy thinking is stimulated, not thwarted, by the "old hand". Frankly, American administration is sometimes weak not merely because of its vastness or "over-largeness", but also because the men at the top, despite sympathetic political views, do not have the continuity of administrative and policy making experience which is the strength of the British type of civil service organization. Political neutrality, experience, and loyalty to policy decisions once made are still the

18. Lord Attlee in Chapter 2 of *The Civil Service in Britain and France* (edited by Wm. A. Robson).

major—and, to me, desirable—features of our type of service. The occasional complete incompatibility of Minister and senior civil servant can be handled with tact and common sense; it does not occur frequently enough to justify overhauling the basis of the civil service. I believe the present Government has been well served by pre-1949 appointees. I repeat my confidence that an alternative government of the future would share Lord Attlee's experience.

One of the great needs borne in on me in recent years[19] is the need for a Minister and his advisers to have something of an agreed understanding on departmental "policy as a whole". Perhaps this is not always so, but in the case of the Department of Trade it has really been important for the department to have a sense of the whole meaning of trade policy and to know where the various parts—import control, Tariff Board, export promotion, encouragement of investment, G.A.T.T., trade treaties, and so forth—fit into the total picture.

Thus if it is shown that import and export policies are related in an interdependent way with agreed developmental growth policies for the Australian economy, a useful reference point is established for analysing more specific courses of action in the import and export spheres.

To refer to import licensing in particular, the content and nature of the controls is very much a reflection of policy needs. Designed—after rejecting other alternatives—to meet a balance of payments situation, import controls can be administered with a view to hampering as little as possible the raw materials, components and capital equipment needs of a growing industrial structure.

A broad approach embracing an appreciation of departmental policy as a whole has two decided advantages. In the first place, the Minister has a general policy rationale which will mostly make sense to his colleagues and his public when defending or explaining particular policies. In this way, too, as the experience of the Japanese Trade Treaty and the handling of import licensing have shown, leadership can be exercised and understanding and acceptance gained in most controversial areas of policy.

The other advantage relates to the ability of the civil servant to help his Minister on ways and means of achieving policy ends. Once agreement is established with his Minister that the Government wishes to secure a rapid but manageable rate of growth of the economy (immigration and investment), full employment and stability, it becomes possible to make more objective judgments about the many courses of action in trade policy, for example, which might

19. I say "borne in on me" advisedly. In a period of rapid change policies require continual review, and it is difficult to argue that any Minister can, at the moment he takes office, have in mind a complete blue-print of his policies. My experience is best illustrated by saying that a new Minister on taking office ought to check his tentative views against a complete review by his senior officials of the total policy operating in the Department at that point of time. In this way he can acquire an early idea of whether major or marginal changes only are indicated.

serve these objectives. If the Government were to change tomorrow it would be desirable to check with it these basic economic objectives. A change of emphasis, *e.g.* on desired rate of expansion, could affect the wisdom of courses of action in the domestic economy and in international economic relations at present thought to be sound.

All this perhaps amounts to no more than an argument that the more openly and clearly the Minister can identify himself and his Government with a statement of policy objectives (the *ends*) the more readily can his department serve him as a "practitioner of means". I hardly need to repeat that his departmental advisers can and do help him formulate and clarify the statement of policy objectives. Not the least advantage of close relations with a Minister which enable this interchange and clarification of ideas is the identification of biases—often "inarticulated"[20]—on either side. Thus grand designs like "preferential trading", "convertibility" and "multilateral trading" can be sound policies under some circumstances and rather nearer hobby horses, even dangerous ones, under others. Their validity needs constant checking as circumstances change.

IV

The traditional anonymity of the civil servant has become harder to preserve. Simply because economic policy issues are complex and frequently controversial, a Minister's public relations are of the greatest importance. Yet the ablest of Ministers in discussing the "whys" and "wherefores" of economic policies—prevailing and intended—will often require the aid of his advisers. This will be true in the provision of material for his addresses; it is even more so in "round-the-table" conferences with "representative" groups seeking some explanation of policy or some change of policy as related to their interests. It is almost inevitable that advisers answer questions at a Minister's request and deputize for him in explaining the technical content of some policy decision. The senior civil servant today cannot remain in a cloister free from public contact. He cannot best serve his Minister if he does. Moreover, I think it a bad thing for him not to have the education of "mixing it" with his Minister's (and therefore his department's) clients; he must have contact with real life.[21]

What I have just said is clearly true in *administering* in detail a given policy—as, for example, import licensing—and I come back to this later. Yet relations also between civil servant and the Minister's

20. See, for example, London *Times*, November 23, 1953, quoting Sir Ivor Jennings: "Senior Civil Servants are intelligent persons, and intelligent persons recognize their bias and do their best to articulate their premises". The *Times* comments: "This is particularly true of Civil servants, whose work constantly imposes on them the need to state and examine their premises: No Civil servant can offer advice to his Minister or present the arguments for and against a particular course of action without making his own premises perfectly plain."

21. "1954 Address", *op. cit.*, pp. 163-164.

public are of growing importance in the making of policy. In these days Minister and Department, separately and together, will meet many groups to discuss policy needs and policy proposals. Here we have the *raison d'etre* of advisory groups like the Manufacturing Industry Advisory Council and the Export Advisory Council. These groups are charged with advising the Minister, palatably or otherwise, on desirable lines of action, given the broad economic policy objectives I have mentioned.

There can be no serious objection to the use of outside advisers. In Australia, however, we are not yet very experienced in the use of regular advisory bodies in economic policy fields. In such bodies senior officials may indeed have a difficult role to perform. They—the officials—must explain existing Government policies and yet not hamper critical reviews of them by the chosen outsiders. They can ensure a constructive attitude but they cannot muzzle advice merely because it may embarrass the Government. In my experience these advisers invariably welcome the help of officials if given courteously and objectively. Whether the officials are effective or not, they certainly, through such bodies, come more and more into the ken of an important cross-section of the nation's commercial and industrial leaders. In these circumstances the concept of ministerial responsibility assumes added importance. For not only must the civil servant avoid becoming a "Minister in disguise", he must, as Wheare rightly argues, also avoid becoming a party politician. His integrity as a permanent official must not become suspect in the eyes of the outside community.[22]

To ask a department to operate such bodies effectively is to place the relations of Minister and his officials under considerable test. The Minister must have confidence that his officials will explain his or the Government's policies fairly and will neither lead nor encourage attack on them, nor prevent constructive criticism. Outside advisers sometimes have direct economic interests in one policy or another. In these circumstances the civil servant must both provide the factual data the advisers require and yet also comment on weaknesses and omissions in reasoning in proposals which advisers may wish to make—especially if faulty reasoning is clearly born of self-interest and prejudice. All this has to be done without forcing the advisory bodies to function merely as rubber stamps. I can cheerfully witness that neither the M.I.A.C. nor E.D.C. is a rubber stamp (and each would resent the thought). I can say also that they are working well because they are doing their own thinking; the department is providing data on request but not cut and dried papers for approval. Departmental comment is sought freely but not always accepted. This is as it should be.

We are indeed merely at the beginning of real experience in the art of public consultation on public policy issues which affect

22. Wheare, *op. cit.*, p. 27.

the well-being of industry. At the back of the experiment is a belief well stated by Sir Raymond Streat: "If government is to act wisely in matters affecting the well-being of industry, in legislation and in administration, it must be basically well-informed on these matters, it must have men who can judge the relevant issues penetratingly, and it must be prodded from time to time and not take the prodding unkindly."[23]

All this consultation involving the civil servant in the danger of contaminating contact with his public may seem rather new and foreign to the traditions of the civil service as we have known them. Yet it clearly arises from the greater pervasiveness of the State in all economic affairs today compared with even only 25 years ago. To put it bluntly again, the Minister can no longer alone handle the frequently technical content of policy discussions with interested groups; his civil service advisers must help him more and more in this work. They inevitably influence policy thinking. Their task and the Minister's task is to ensure that they do not in any way restrict the Minister's responsibility as final arbiter before Cabinet and Parliament of his Department's policies. It speaks well for the sound traditions of the British and British-inspired civil services that there has been thus far so little trouble in fact in keeping the relative roles of Minister and civil servants in proper perspective, even though public servants appear more and more in semi-public places. There are risks, but, in my view, they are worth taking if the Ministry is better informed and better advised as a result.

V

Not so novel, but in many ways even more testing of the relations between Minister and Department, is the detailed departmental administration of given policies. As Finer said in a pre-war work: "The occasional revelations of administrative pathology are, in the formation of opinion, more powerfully efficient than the steady meritorious work accomplished day by day, which, after all, is the foundation of English government."[24] You can understand my recognition of the perception in this sentence when I tell you that two or three mistakes (or fancied errors) in administering import licensing can attract great and adverse publicity. Yet some 150,000 individual decisions are made in the course of a year; in such a number there must be more than two or three errors of judgment in applying policies.

There are two great problems here. In the first place, justice has both to be done and seen to be done. This cannot be done on the Minister's behalf by officials if policies are not clearly expressed and

23. "Government Consultation with Industry" in *Public Administration* (U.K.), Spring, 1959, p. 6.

24. *The Theory and Practice of Modern Government* (as revised by W. B. Guthrie), 1934, p. 879.

defined. We have learnt from experience that if we cannot explain the reason for a decision we really have not a clear policy that covers the case. Nevertheless, even with the most careful effort to clarify policies, mistakes of judgment can occur in 150,000 decisions. Hence the importance of some form of review of bureaucratic decision. Since the emphasis on this or that aspect of total import licensing policy changes as import "ceilings" are varied, particular sub-policies (*e.g.* about "new-comers", about location of items in this or that category, and about anomalies arising from past policies or administrative decisions) necessarily change too. Therefore, any review machinery must adjudge appeals against departmental decisions in the light of prevailing policies, clearly stated. This is why administrative review boards rather than a judicial appeals system has so far proved the more practicable approach. The Review Boards in each State comprise two outside business men and one departmental man. In 1958 they reversed fully or partially the departmental decision in about 20 per cent. of cases appealed. Appeals in that year totalled under 600 or 0·4 per cent. of the 150,000 decisions. During 1959 the number of appeals dropped, but the success rate for appellants rose. The bulk of the cases appealed are now marginal or borderline cases. In all but a very few of the appeals the Minister accepts the Review Board's recommendations. A similar system has recently been adopted for cases of trafficking (*i.e.*, sale of import licences).

By a combination of continual clarification of policy and this independent check on departmental judgments in particular cases, the Minister is able to enjoy confidence in his own mind and to secure public confidence also that the great bulk of decisions, which he simply must delegate to the department, will be made within policies known and accepted by him and publicly understood.

The second problem is that as new types of cases arise the department does frame new policies to fit these cases. Here is a clear case of departmental initiative. The practice is to consult panels like the Chamber of Commerce on such changes in principle and then to clear the policy evolved with the Minister. The Permanent Head has an area of discretion which he must exercise with a careful eye to the political implications of judgments he may make on the Minister's behalf. He is helped in this if he is able to establish complete frankness between himself and his consulting groups.

I have referred to import licensing as a principal source of illustration. Another excellent example is the administration of the Japanese Trade Treaty. Here a triangular relation between industry, department and the Japanese Government has been developed to ensure that the safeguards in the Treaty, designed to prevent serious damage to local industry, operate fairly to all parties. In this area, as in import licensing, consultation between all parties (including the Special Advisory Authority—Mr. M. E. McCarthy) is predicated

on the use of agreed factual data and the frankest mutual discussion of them.

VI

I have already exceeded the intended detail of my remarks. Yet I cannot refrain from a comment on Ministerial responsibility. This concept is still the keystone of an effective civil service as I see it.

The civil servant is willy-nilly brought into contact with the public to a degree undreamt of in the days before the welfare state and before the government's own decisions so dominated the economic climate as they do to-day.

Delegation of authority in administration by the Minister helps him manage the otherwise unmanageable. With the help of his department he can fashion national policies on complex issues. By building a competent machine he can delegate administration of policies infringing on the ordinary citizen and expressed in thousands of day-to-day decisions. This has to be done in a way that gives him confidence that these decisions are within policy and that he can therefore accept responsibility for what his department does. He is wise to develop checks on departmental policy thinking by tapping outside opinion, and on departmental administrative decisions by establishing some form of independent review machinery.

Far from weakening the scope and need for ministerial responsibility, the growing influence of a bureaucracy on policy makes the Minister's responsibility for controlling his department more vital even if more difficult.

Whether it is fair or not, the Minister is answerable in Cabinet and in Parliament for the actions of his department. I am not here considering the circumstances in which he should resign—I have, however, been implying that under certain conditions it is not unreasonable to ask the Minister to answer for and be loyal to his department. These requisite conditions are: (1) policies must be clearly and explicitly understood as between Minister and Department and must carry his imprimatur; (2) decisions given in individual cases by the department must be explainable in terms of those policies: if they are not, policies must be overhauled; (3) some system of outside consultation and independent review is necessary to ensure that policies are understood by those affected and that justice is done in the individual case. If these conditions prevail, a Minister can be expected to do no more than apologize for a mistaken application by his servants of his policies and to set about rectifying the mistake. If, on the other hand, his policies are attacked, then he must stand to his own defence even if his advisers have helped in their making. Civil servants are advisers, not Ministers. Civil service advisers cannot take public responsibility for unpopular policies, although they will loyally try to explain and administer them in practice.

If these conditions do not prevail then the Minister, with the aid of his Permanent Head, has a primary duty to himself and his colleagues; he must set about creating the conditions in which his policies are known to all concerned and capable of equitable administration by his department. For if these conditions do not prevail, a Minister's handling of his department can rightly be assailed. If he is weak and ineffective in these matters he can even be a victim of uncontrolled policy making and arbitrary administration by his department. While, as I have already stated, I believe Cabinet itself will finally check such weakness and departmental irresponsibility under the pressure of Parliamentary and public criticism, a good deal of damage to the reputation of Government, Minister and Department can occur before the remedy is applied.

It goes without saying that in policy making these days the situation cannot be satisfied by a once for all policy review. The only constant in to-day's situation is the fact of change. It follows that the Minister and his department must have frequent policy review sessions. Thus the right course in G.A.T.T., or attitude to G.A.T.T., will vary as circumstances change. An import ceiling is raised £50m. —the departments and Ministers concerned must discuss the best way to use this liberalization. The Treaty for Japan is due for renewal in 1960. Already our experience is under review ready for important policy decisions in that year. So, too, with the European Common Market and moves for a Free Trade Area in Europe. So, too, with surplus disposals, and a hundred and one other things which fit into, or must be fitted into, the policy as a whole to which I made reference earlier.

It can all be exciting, but it is not necessarily very restful for either Minister or department!

VII

Not unnaturally I have again, as in 1954, drawn directly from my own experience as a Permanent Head. To those who object to a normative approach, I freely admit that my remarks have been sprinkled with personal value judgments and perhaps too many precepts. I can hardly apologize for this, for I have indeed written and spoken directly from experience. I believe that much that I have said is capable of generalization; where it is not it may nevertheless raise worthwhile questions. The precepts do not have to be accepted, but they, too, may provoke worthwhile discussion.

Not too explicitly, yet inevitably, I think, I have suggested that the "integration of appointed officer and elected politician" is an inescapable necessity in this day and age. Northcote and Trevelyan built well—better than they could know—in shaping the structure and traditions of the British type of civil service in the way they have evolved. Yet the tests to the system are greater to-day than they ever have been. We can agree, without apologizing for it, with Pro-

fessor Wheare's verdict that since the Northcote-Trevelyan Report of 1854 there has been a "tremendous rise in the authority of the civil service". We can argue, also, that "nowadays the principal influence in government lies with a bureaucracy acting through a cabinet with the advice and consent of Parliament".[25] The emergence of the modern welfare state and the complexities of modern economic life have brought this about. Many have seen in this a rising threat to effective control of the bureaucracy by the Executive (Cabinet) and by Parliament. I do not believe that control has been seriously weakened; but as government more and more pervades the economic and social affairs of a community, it is wrong—if political democracy in a community is to be a vital reality—to ignore the danger. The greatest single responsibility of Ministers and their senior civil servants is to be conscious of the problem in their policy making activities and in their administration. Ministers must and do carry responsibility for policy, even though their civil servants play an increasingly important part in the making of policy judgments. The proper role of the civil servants remains that of policy advisers, influential perhaps but not paramount, and loyal administrators of the wishes of Cabinet and Parliament properly and clearly expressed.

J. G. CRAWFORD

Canberra.

25. Wheare, *op. cit.*, p. 17.

ECONOMIC CONTROL IN A DEPENDENT ECONOMY*

"Whether Political Economy is Useful"

B. "We may then, I think, lay it down, with your consent, as a general proposition, that wherever a great many agents and operations are combined for the production of a certain result, or set of results, a commanding view of the whole is absolutely necessary for effecting that combination in the most perfect manner."

A. "I agree."

B. "But a commanding view of a whole subject, in all its parts, and the connexion of those parts, is it anything but another name for the theory or science of the subject? Theory is literally *view*; and science is *knowledge*; meaning view, or knowledge, not solely of this and that part but, like that of the general with his army, of the whole."

A. "I see the inference to which you are proceeding. You mean to say that the theory or science of political economy is a commanding view of the vast combination of agents and operations engaged in producing, for the use of man, the whole of the things which he enjoys and consumes; in other words, the things which he denominates the matter of wealth—the great object to which almost all the toils and cares of human beings are directed."

B. "You have anticipated me correctly."

A. "You would further proceed to ask me, I have no doubt, whether the innumerable operations which take place in subservience to that end, may not take place in more ways than one; in short, in a worse way, or a better way? Whether it is not of importance that they should take place in the best way? And whether the difference between the best way and the worst way is not likely to be very great. . . . And to all these questions I should answer in the affirmative."

B. "I should become in love with controversy, if I always met with such controversialists as you."

—From a dialogue by James Mill

Theory and Policy

1. In a system in which private enterprise predominates, economic decisions—what to buy or sell, what to produce or consume, what to lend or borrow, what price to charge or pay—are made by numerous separate persons, firms and institutions. But Society has an interest in how all these decisions fit together into a social pattern, and how they add up into certain social aggregates. This reconciliation between the parts and the whole is the responsibility of an economic system and its controlling institutions. In earlier seminars we have considered the theory of Welfare Economics primarily as a critique of the *pattern* of production and distribution, *e.g.*, contrasting the pattern resulting from a *laissez-faire* economic system of perfect competition with that of one containing important monopolistic elements, or one in which the State intervenes to regulate the allocation of resources or the distribution of incomes. Now we turn to some social

* This paper was circulated to the members of a seminar in the Australian National University in the last year of Sir Douglas Copland's office as Vice-Chancellor. It has awaited publication as part of a larger study and in that sense is still subject to revision; this special number of *The Economic Record* is, however, a most happy occasion upon which to reproduce seminar notes originally presented in the University which Sir Douglas Copland as first Vice-Chancellor effectively created.

objectives which can be expressed and empirically measured in terms of *aggregates* (or averages); and the question may be asked, not merely whether a particular economic system serves these objectives well or badly, but whether, with a given structure and institutions, it can achieve them at all.

2. We choose for illustration three such possible objectives. Their choice is theoretically arbitrary, but it happens that their practical fulfilment is one of the tests by which governments and indeed nations in the modern world may rise or fall:

I. *Internal Balance.* Maintenance of a balance between the effective aggregate supply of and demand for goods and services produced by domestic resources, corresponding with some definition of "full employment without inflationary pressure."

II. *External Balance.* Maintenance of a balance between the effective aggregate supply of exports and demand for imports, corresponding (after allowing for the terms of trade and for financial transfers) with some definition of "balance of payments equilibrium".

III. *Internal Price Stability.* Maintenance of a specified "general price-level" of goods and services bought domestically, corresponding with some definition of price stability in terms of an index number (*e.g.*, in Australia the "C" Series).

3. Our aim is to explore, in a simplified economic system, the conditions under which these objectives may be realized, together or severally. Until the economic system has been analysed as a whole, there is no way of knowing even whether the three objectives are mutually consistent. Their realization (if it is possible at all) will clearly imply that the relevant variables of the economic system are somehow controlled as *instruments* of economic policy—a control which must work through social institutions, whether in the form of market mechanisms or of official administrative agencies. The nature of the economic system itself determines which variables need to be controlled, and also to what extent one objective may be sacrificed for the benefit of another.

4. This exploration may be described as an essay in political algebra. The iron law of political arithmetic says that we can't have our cake and eat it too. In political algebra, with more degrees of freedom, we can eat some kinds of cake and still have others—but only if we discriminate according to the rules of the economic system. Those who are too ignorant, too greedy, or too ambitious to keep their choice within the rules will be disappointed; they will suffer that "economic remorse" which Croce called the heart of Economics, and which Politics too often wears upon her sleeve.

Definitions and Simplifying Assumptions

5. Our simplified economic system is represented in terms of the following aggregates and averages:

Y: The aggregate volume of domestic *Production* of goods and services, measured by some index number.

J: The difference between the volume of exports and the volume of imports, measured conformably with Production—*i.e.* the *Import Surplus* (positive, zero or negative).

D: The aggregate volume of domestic *Demand* for purposes of consumption and investment (public and private), measured conformably with Production and Import Surplus.

P: The average *Internal Price Level* of goods and services bought domestically, measured by some index number (*e.g.*, the "C" Series).

R: The average *External Price Level*, measured by some index number of the prices of exports and imports in domestic currency.

W: The average *Money Wage Level*, measured by some index number of wage rates.

V: The average *Real Wage Level*, measured by the Money Wage Level divided by the Internal Price Level.

6. We take as given the available labour force and other domestic resources, and the technical and entrepreneurial environment which determines the productivity and competitive structure of the economy. These factors are "given" in the sense that they are assumed to be independent of the variables considered, rather than that they are constant. But it is usually convenient to write as if they were in fact constant, and some adjustment of the argument would be needed if their changes were to be incorporated in it—*e.g.*, the Wage Level might be treated as an Efficiency Wage Level, after allowing for productivity changes.

7. Similarly, we take as given the terms of trade between export and import prices, and also the level of capital inflow or outflow and other financial transfers. This means that the balance of payments is fully determined at any volume of the Import Surplus. To treat the terms of trade as a datum is in sharp contrast with most of the literature; the argument is directly applicable only to a "dependent economy"—*i.e.*, a small country which trades in world markets that are competitive in the sense that the prices it receives for exports and pays for imports are independent of its domestic conditions of supply and demand. However, for a majority of countries (by number, not by weight), and typically for those exporting chiefly primary products, this assumption is closer to reality than the usual text-book situation in which the terms of trade are regarded as sensitive to

domestic changes, and home-trade products are more or less interchangeable with exports.[1]

8. We assume (in the first instance) that there are no import restrictions or other direct controls which would "distort" the allocation of production and demand in accordance with the price mechanism.

9. We also assume (again in the first instance) that there are no indirect taxes or subsidies, and no extraneous elements such as controlled dwelling rents, which would "distort" the pricing process by which the Internal Price Level (P) is related to the costs of the labour and materials used in the production of goods and services for domestic sale. In effect, these goods and services are regarded as being "fabricated" by combining domestic labour (whose cost is represented by W) with materials consisting of exportables and imports (whose cost is represented by R).

The Structure of the Economic System

10. If for the moment the three chosen objectives are ignored, and both domestic production and the import surplus assumed to be indefinitely extensible to cope with all demands, the relevant structural features of the economy can be defined very simply as follows:

(i) The aggregate of Demand (D) equals Production (Y) plus Import Surplus (J).

$$D = Y + J \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(i)}$$

This merely reflects the accounting identity between "national expenditure" and "national income" (or product). (Exports, which are included in Y but have no part in D, are subtracted from imports in arriving at J, thus preserving the identity.)

(ii) The division of Demand (D) between Production (Y) and the Import Surplus (J) depends on the price-level of exports and imports relative to domestic labour costs—*i.e.*, on the ratio of the External Price Level (R) to the Money Wage Level (W).

$$Y = f\left(D, \frac{R}{W}\right) \quad \ldots\ldots\ldots\ldots\ldots\ldots \text{(iia)}$$

$$J = g\left(D, \frac{R}{W}\right) \quad \ldots\ldots\ldots\ldots\ldots\ldots \text{(iib)}$$

1. This is, for example, the situation envisaged almost throughout the latest standard work, J. E. Meade's *The Balance of Payments*, 1951. Thus Meade insists that the whole *modus operandi* of exchange depreciation as a means of improving the balance of trade is by cheapening exports in terms of imports (*e.g.* p. 170). Again, he reaches the conclusion that an effective exchange depreciation must reduce real wages *via* a worsening of the terms of trade (p. 202), although in fact the conclusion holds even if the terms of trade are left unchanged. It is significant that an economist from a primary producing country was one of the first to develop balance of payments theory along new lines by stressing the relationship between external prices and domestic costs, rather than the terms of trade (Dr. Roland Wilson, *Capital Imports and the Terms of Trade*, 1930).

Given D, the share of Y will rise and the share of J will fall as R rises relative to W. (Higher external prices relative to domestic labour costs improve the supply position of exportable and import-competing products, and at the same time switch demand away from imports and exportable towards the relatively cheaper home-market products.) Given the ratio of R to W, both Y and J will rise as D rises.

(iii) The Internal Price Level (P) depends on the volume of Demand (D) and on the absolute heights of the External Price Level (R) and the Money Wage Level (W).

$$P = h(D, R, W) \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad \text{(iii)}$$

Given R and W, P may either rise or fall as D rises, according to whether on balance "increasing costs" or "decreasing costs" prevail with greater output, and whether higher turnover leads to an increased or decreased degree of monopolistic exploitation. Given D, P will rise with both R and W; and—accepting the orthodox value theory, under the assumptions of paragraph 9—if R and W rise by an equal proportion, P will rise by the same proportion. In other words, P behaves *as if* it were a weighted average of labour and materials costs, plus a percentage gross profit margin which may vary with turnover—but this behaviour is consistent with more orthodox interpretations.

11. Of these four equations, only three are independent; one out of (i), (iia) and (iib) adds nothing to our information, since by definition (iia) and (iib) must inevitably add up to the satisfaction of (i), and either can be derived by subtracting the other from (i). We therefore have at this stage three genuine equations in six variables (D, Y, J, R, W, P), with indeterminate results, as one might expect if no limit is set to production or the import surplus.

Objectives and Instruments of Policy

12. But as soon as the three objectives are introduced, this indeterminacy is removed and the requirements of policy become clear-cut. Objective I (Internal Balance) amounts to *specifying* a definite figure of Production, which corresponds with "full employment without inflationary pressure", and may be distinguished by an italic (Y). Similarly, Objectives II (External Balance) and III (Internal Price Stability) amount to specifying definite figures of the Import Surplus (J) and the internal Price Level (P) respectively. The remaining three variables (D, W and R) are then left as dependent variables, completely determined by the three equations and the specified objectives. In other words, the volume of Demand, the Money Wage Level, and the External Price Level must all three be controlled and manipulated as *instruments of policy* if the three objectives are to be achieved. Further, the Real Wage Level (V, de-

fined as the ratio of W to P) is also implicitly determined as an instrument of policy directed towards the three objectives.

13. The manner in which the structure and objectives of the economy determine the required volume of Demand, the Money and Real Wage Levels, and the External Price Level, may readily be seen if the structural equations are rewritten, distinguishing with italics the variables specified in advance as objectives of policy:

Aggregate Balance: $D = Y + J$ .. .. (i)

Internal Balance: $Y = f\left(D, \frac{R}{W}\right)$ .. .. (iia)

External Balance: $J = g\left(D, \frac{R}{W}\right)$ .. .. (iib)

Internal Price Stability: $P = h(D, R, W)$ .. .. (iii)

Thus by (i) a unique volume of Demand is immediately determined as a necessary condition of the first two objectives; but not as a sufficient condition, since the aggregate may not be correctly split between Production and the Import Surplus. To ensure this correct division, either (iia) or (iib) prescribes a unique ratio of the External Price Level to the Money Wage Level, once Demand is given. Finally, since this ratio and Demand are now both determined (iii) can be satisfied only by unique *absolute* values of the External Price Level and the Money Wage Level; and the required Real Wage Level is in turn implied by the ratio of the Money Wage Level to the specified Internal Price Level.

14. This system of policy determination for the instrumental variables is illustrated in Diagrams I and II (pp. 57-8).

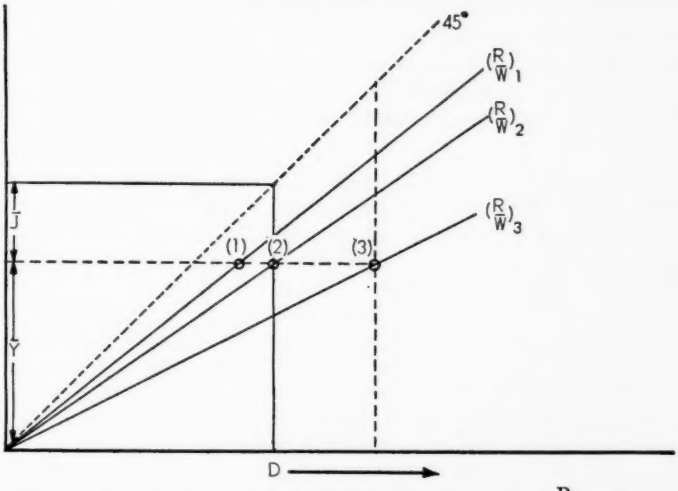
15. How can the External Price Level be controlled as a matter of domestic policy? Since external prices are measured in domestic currency, control can always be achieved—in theory—by changing the exchange rate (or by an equivalent system of duties and subsidies).

16. Let us consider a concrete example of the kind of manipulation which may be involved in achieving the three objectives in the face of some outside change. Suppose that an initial "equilibrium" situation is disrupted by a reduction in capital inflow which calls for a smaller import surplus. Our three objectives then require the following adjustments to be made:

(a) The volume of Demand (D) must be retrenched to the extent of the required cut in the Import Surplus (J) by means which might include budgetary and monetary policy (and which must be judged quantitatively so as to include an offset to the probable stimulus to investment arising from the next item on the programme).

(b) The ratio of the External Price Level (R) to the Money Wage Level (W) must be raised, so as to ensure that the

Diagram I



The point (2), representing a certain value of D and of $\frac{R}{W}$, achieves both external and internal balance. Points (1) and (3) achieve internal balance at different levels of D, but in the former $\frac{R}{W}$ is too high for external balance, and in the latter it is too low.

whole of the cuts under the previous item will fall on the import surplus and not on production and employment.

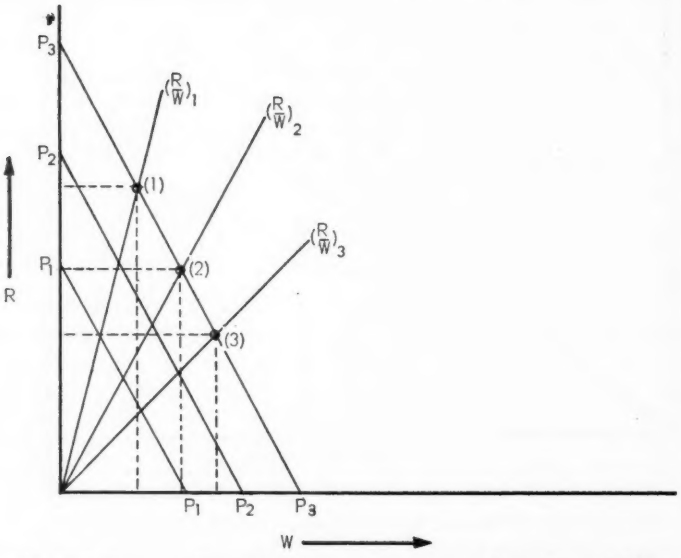
(c) This change in the ratio must be achieved partly by raising R (*e.g.*, by exchange depreciation) and partly by reducing W, so as to keep the Internal Price Level (P) stable in spite of higher domestic prices for exportables and imports.

(d) A fall in the Real Wage Level (V) is therefore necessarily implied; or alternatively can be regarded as a direct instrument or policy, leaving the fall in money wages instead to be implicitly arrived at.

17. It is interesting to note that if the initial change had included a sufficient upward shift in external prices, as well as a cut in capital inflow, then exchange appreciation would have been required, in spite of the need to reduce the import surplus.

18. In this way, given the three objectives and the assumed structure of the economy, the necessary behaviour of domestic Demand, the External Price Level (in domestic currency), and of the Real and Money Wage Levels is prescribed in all circumstances. Since these variables are necessary instruments of policy, they cannot themselves be made independent objects of policy, nor can they be made subject to any independent influences or restrictions whatever.

Diagram II



The PP lines are "iso-price" lines whose slope reflects the weighting of R and W in P. If the price-level objective is specified as P_3, and $\left(\frac{R}{W}\right)_3$ is the ratio determined in Diagram I, then the point (2) gives the required required absolute values of R and W.

19. The equations of paragraph 13 merely *define* an "equilibrium" behaviour; they do not say how the necessary movements are to be brought about—that is a separate and "dynamic" question of administrative arrangements and/or market mechanisms, to which we shall shortly return.

Choice Amongst Objectives

20. How far can these prescriptions be relaxed if we are prepared to abandon one or another of the three objectives? The abandonment of an objective amounts to removing the italic from one of the variables of the equations in paragraph 13—so providing another dependent variable and enabling one of the former "instrumental" variables to be independently determined. But the structure of the equations is such that the choice of variables which can be transferred from the "instrumental" to the "independent" class is restricted. It is convenient to consider the problem in two parts—first, the consequences for the two "real" variables (the volume of Demand D and the Real Wage Level V) and then those for the two "monetary" variables (the External Price Level R and the Money Wage Level W).

21. Taking the abandonment of objectives in reverse order, the consequences for the "real" variables (D and V) are as follows:

Abandoning Objective III (Internal Price Stability). D and V must still be controlled as instruments of policy for Objectives I and II; in "real" terms, the system is fully defined by those objectives, and the abandonment of a merely monetary objective makes no difference.

Abandoning Objective II (External Balance). Either D or V can now be independently determined, but the other must still be controlled for Objective I. The maintenance of internal balance requires that any arbitrary change in D or V be accompanied by an appropriate change in the other member of the pair *in the same direction.* Simultaneous abandonment of Objective III as well as II makes no difference in real terms. If II is abandoned merely in a "price-mechanism" sense, and any actual increase in the Import Surplus prevented by direct controls, D cannot be arbitrarily increased but must be controlled in the interests of Objective I; V can still be arbitrarily increased, if prices remain tied to costs as in equation (iii)—but price control may be necessary to prevent the latter from being disrupted by the excess demand for restricted imports, and of course in the limit the weighting system implicit in (iii) would become irrelevant.

Abandoning Objective I (Internal Balance). If the departure is in the direction of unemployment, either D or V can be independently varied (D downwards, V upwards), the other remaining as the policy instrument for Objective II. But if the departure from internal balance is in the direction of inflationary pressure, D cannot be arbitrarily increased unless Objective II is also abandoned—since the excess demand for domestic production will "spill over" into the Import Surplus. However, V can be arbitrarily reduced, because in this case the "spill-over" from the excessive concentration of demand on domestic production will serve the interests of Objective II, so long as D is correctly controlled in the aggregate. Simultaneous abandonment of Objectives I and II makes any arbitrary movement of both D and V, in either direction, admissible—*e.g.*, we can have vast unemployment and also a vast import surplus, if D is high but home production made unattractive by the relative costs associated with a sufficiently high V.

22. The consequences for the "monetary" variables (R and W) are as follows:

Abandoning Objective III (Internal Price Stability). Either R or W can be independently determined, but not both. For example, the exchange rate can be left unchanged in the face of international price fluctuations, but W, D and V must still be controlled for Objectives I and II.

Abandoning Objective II (External Balance). Either R or W can be independently determined (in place of D or V, as in paragraph 21); the resulting situation will differ for all four variables. For example, if W is arbitrarily raised, Objectives I and III will call for R to be lowered and both D and V to be raised. If Objective III is simultaneously abandoned, both R and W can be independently determined or one out of R and W can be independently determined together with one out of D and V (but not D and V together).

Abandoning Objective I (Internal Balance). This case is rather similar to the previous one—the asymmetrical effects noticed in connection with the "real" variables in paragraph 21 do not arise, since their source was essentially in the role of D.

23. The above notes are not exhaustive, but they illustrate the main points. We may notice especially the following conclusions:

(a) Abandonment of one of the real objectives, External and Internal Balance, provides a new degree of freedom which may be taken out in either "real" or "monetary" terms, and which then leads to a situation in which all four "instrumental" variables (D, V, R, and W) are set at different levels; whereas abandonment of the "monetary" objective, Internal Price Stability, provides only a "monetary" degree of freedom, and leads to a situation in which the two "real" variables (D and V) are unchanged.

(b) The role of the volume of Demand is crucial—in one direction. If D is set too high, the objectives of External and Internal Balance must *both* be abandoned. Inflationary pressure arising from this source is much more serious than that involving merely a wrong division of D between domestic production and the import surplus, although the internal symptoms may be the same. The wrong division does not attack External Balance and also it helps to bring its own cure by driving up wages in relation to external prices—a process which need not involve the abandonment of Internal Price Stability, if the External Price Level is lowered by exchange appreciation so as to meet wages half-way.

(c) It is clear that the danger of price inflation is not the ultimate obstacle to a wage level that meets the heart's desire; real wages can be inflated (beyond a point) only at the expense of unemployment or the balance of payments.

Assignment of Instruments to Objectives

24. From a formal point of view, so long as we remain in the "static" world so far described, it does not matter in the least whether we think of particular instrumental variables being assigned to particular objectives. Our equations define a certain constellation

of the variables as necessary for the achievement of the three objectives, and that is all there is to it.

25. But from a more practical point of view, and especially when we introduce "dynamic" considerations into the problem, it may matter a great deal whether our social institutions are so designed that they seek to relate the level of wages (for example) to Internal Balance, rather than to External Balance or to Internal Price Stability.

26. There are eight possible permutations according to which the control of the Money Wage Level (W), the External Price Level (R), and the volume of Demand (D) may be related to the tasks defined in the equations of paragraph 13. (Control of the Real Wage Level could also be substituted for that of the Money Wage Level, but there is no need to consider them both at this stage.) The permutations are set out in the following table:

	ALTERNATIVES							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Aggregate Balance	D	D	—	—	—	—	—	—
Internal Balance	(W	R)	W	W	R	R	D	D
External Balance			R	D	D	W	W	R
Internal Price Stability	R	W	D	R	W	D	R	W

These alternatives apply equally whether control is exercised through market mechanisms or official agencies.

Market Mechanisms

27. What hope is there of securing our objectives by a reliance on appropriate *markets* for the control of the instrumental variables? Clearly, R—whose control requires the movement of the exchange rate—can be assigned only to a currency market, which must be concerned with External Balance. Equally, W can be assigned only to a labour market, which must be concerned with Internal Balance. These two considerations rule out all the alternatives except No. (3). But can the control of D be associated with a "market" concerned with Internal Price Stability as Alternative No. (3) requires? Yes, the Pigou effect (tendency for demand to be contracted if higher prices reduce the real value of cash holdings) and the liquidity effect (tendency for interest rates to rise if more cash is absorbed in carrying out current transactions at higher prices) might theoretically help to do the trick, given in both cases a relative stability of the stock of cash. But for various reasons both these effects are likely to be slow and unreliable—short-run reactions of Demand to price movements are in fact very likely to be perverse.

28. Make the best assumption, that D reacts significantly downwards to a rise in P. Now suppose that overseas prices rise, disturbing a pre-existing equilibrium situation. The initial tendencies are then for P to rise (causing D to fall), and for demand to be switched from exportables and imports to home-market products (causing the

exchange rate to appreciate and wages to rise, under market influences). Evidently the outcome of all this must depend in a very complicated way on the relative speeds and magnitudes of the different effects. If the exchange rate reacts very promptly, the other effects will be minimised—which is precisely what equilibrium requires. But if the exchange rate reacts only slowly, the switch in demand may cause a boom in local industry which outweighs the tendency of D to react negatively to increases in P, and so leads to substantial increases in both D and W, with a consequent drain on the balance of payments which may point to an actual depreciation of the exchange rate. Thus equilibrium may never be reached.

29. If the exchange rate reacts slowly towards appreciation (*e.g.* it takes the life-time of the Country Party) but quickly towards depreciation (*e.g.*, it takes the interval between elections), the prospects of instability are no doubt still greater. (This suggestion, of course, contradicts the present assumption that the exchange rate is controlled by a currency market.)

30. But perhaps the greatest weakness of reliance on market mechanisms along these lines is the fact that a "monetary" objective —Internal Price Stability—is made to depend on a "real" instrument—the volume of Demand. Intuitively, this suggests inherent tendencies towards instability—although these cannot be proved without an explicit "dynamic" analysis, which has not yet been developed. The converse case—the devotion of a "monetary" instrument to a "real" objective—does not present the same intuitive paradox, since (as we have seen) the abandonment of a "real" objective always enables a "monetary" instrument to be disregarded, whereas the abandonment of a "monetary" objective does not enable a "real" instrument to be disregarded.

31. In the present case, abandonment of the "monetary" objective of Internal Price Stability would not allow the volume of Demand to be disregarded even though we have supposed Demand to be regulated entirely with respect to that objective. For a sufficient volume of Demand can always destroy both Internal and External Balance. We would have to fall back instead on what may be called the *gold standard* solution, in which R is taken as given, W is governed by Internal Balance, and D governed by External Balance. This corresponds with Alternative No. (4), except that it is recognized that R now has no instrumental role in relation to Internal Price Stability.

32. We suspect (but cannot yet prove) that this *gold standard* system provides the best hope of a stable solution which is consistent with at least the two "real" objectives, and which may be achieved through automatic mechanisms of a market or quasi-market character. This is a melancholy conclusion for anyone who likes such automatic mechanisms, since it is notorious that "full employment without inflationary pressure" can be expected under the gold standard only

if money wages and prices are flexible to an unrealistic degree, and even then only at the expense of a corresponding violence in departures from the objective of Internal Price Stability.

Official Agencies

33. If then we may be forced to rely on official agencies rather than "markets", let us identify three imaginary agencies. The *Treasury* will be supposed to control the volume of Demand (using not merely budgetary policy but also monetary and credit policy which is technically in the sphere of the Central Bank). The *Bank* will be supposed to control the exchange rate, and so the External Price Level in domestic currency. The *Court* will be supposed to control the Money Wage Level.

34. These agencies can in principle operate any one of the eight alternative systems, including (3) and (4). There will now be no need under (4) for our economy to leave itself at the mercy of international price fluctuations if the Bank can adjust the exchange rate to prevent them, and the gold standard "automatic" mechanisms can (if we like) still prevail for W and D.

35. If our policies are to be administered by official agencies, we must provide them with comprehensive rules of conduct. Following are two examples:

Alternative (7)

(a) The Treasury is to expand or contract the volume of Demand according to whether employment is less than or more than "full".

(b) The Court is to raise or reduce the Money Wage Level according to whether the Import Surplus needs to be increased or diminished.

(c) The Bank is to change the exchange rate so as to raise or reduce the External Price Level according to whether the Internal Price Level is falling or rising.

Alternative (1)

(a) The Treasury is to expand or contract the volume of Demand in line with the aggregate of specified full employment Production plus the specified Import Surplus.

(b) The Court is to raise or reduce the Money Wage Level according to whether employment is more than or less than full (or according to whether the Import Surplus needs to be increased or diminished, which given (a) amounts to the same thing).

(c) The Bank is to change the exchange rate so as to raise or reduce the External Price Level according to whether the Internal Price Level is rising or falling.

36. Both these sets of rules—and the six others—would be *consistent* with our objectives. But only an explicit dynamic analysis, taking account of reaction speeds, could say whether in the process of trial and error the objectives would be approached by the official agencies any more surely than by market mechanisms.

37. It should be noted, however, that the Court is *never* called upon to use wage policy as a means of influencing the aggregate volume of Demand—indeed to do so would be inconsistent with the three objectives—so that for the Court's purposes arguments about such matters as the effects of wage changes on consumption or investment are irrelevant; on the other hand, within an appropriate set of rules the Court may properly consider the influence of wages on the share of Demand directed towards domestic Production. But even the latter is ruled out if the Treasury is supposed to be adjusting demand in the interests of Internal Balance.

Some Queries and Suggestions

38. In the above illustrations it is money wages which are supposed to be under the Court's control. The results, in any equilibrium in which all objectives are achieved, must be precisely the same if the Court is supposed to control real wages (*e.g.* through an effective "automatic adjustment"), since the specified Internal Price Level and the controlled Money Wage Level between them already imply a Real Wage Level. But the problems of dynamic stability may be very different in the two cases. For example, if money wages are the controlled variable, any "error" in fixing them can be offset by a corresponding adjustment in the Internal Price Level, without destroying Internal or External Balance; but a persistent "error" in real wages must involve the abandonment of either Internal or External Balance, or else produce an indefinite cumulative price movement in the effort of the system to prevent this.

39. Nevertheless, there is a good deal to be said for the "automatic adjustment" principle (if only because it may focus attention on the fundamental problem in real rather than merely monetary terms). The resulting tendency to instability may perhaps be overcome if External Balance is sought, not instantaneously or over very short periods, but over an average of years, with international reserves (or import licensing) used to cover short-period fluctuations. However, if the Court effectively controls real wages its concern must be with External Balance, and the exchange rate can only be used to secure the Internal Price Level objective.

40. According to current political realities, it is almost inevitably the Treasury, controlling the volume of demand, which must move directly to secure full employment; it is scarcely thinkable that this task would be left to the more indirect price-adjustment mechanisms of the Court (wages policy) or the Bank (exchange rate policy).

But this apparently means that the "natural" forces which impel wages upwards when employment is over-full, and downwards—perhaps less reliably—when unemployment prevails, must often be wasted and indeed resisted in giving effect to wages policy. For if the Treasury's demand policy is concerned with Internal Balance, it follows that wages policy must be concerned either with External Balance or with Internal Price Stability; the Court must therefore reduce wages when the Import Surplus is too large, or alternatively when the Internal Price Level is rising—both contingencies which are likely to result from a Treasury "error" in the direction of over-full employment, and which in that case call upon the Court to move wages *against* the pull of the labour market. The Bank, if its concern is with Internal Price Stability, must in these circumstances paradoxically appreciate the exchange rate; while if its concern is with External Balance, it must depreciate—the "natural" reaction, but one which may make it even harder for the Court to put through the prescribed wage cut, and may also tend to raise demand and magnify the Treasury's original error. In any case, no action to protect the balance of payments, whether through wages or exchange rate policy, can possibly be effective if Demand is excessive.

41. Again, a practical solution might be found in proper rules for the relative timing of the action to be taken, relying as in paragraph 39 on international reserves to buy time for External Balance. Thus a temporary Treasury "error" in regulating demand may be allowed to cause a "market" rise or fall in wages, which will help to correct its own cause by diverting demand away from or towards local resources, with corresponding fluctuations in the balance of payments. This will be satisfactory provided that the Treasury errors are neither too great nor systematically biased in one direction, and provided that the Court or the Bank (whichever is concerned with External Balance) can make its policy effective to the extent of ensuring that "market" fluctuations take place around a long-run moving equilibrium level of real wages—the length of the "run" depending on the magnitude of the international reserves and the Treasury's errors. (If temporary import licensing can be employed, the time period of the "equilibrium horizon" will be lengthened.) The contemplated prospect of short-term "market" fluctuations in wages implies either that Internal Price Stability is sought only as a long-term objective, or else that the Bank and not the Court is the authority concerned with Internal Price Stability.

42. In other words, it seems that—taking various dynamic and institutional considerations roughly into account—the following rules of conduct may form the basis of a workable system:

(a) The Treasury is to expand or contract the volume of demand as quickly as possible according to whether employment is less than or more than "full".

(b) The Court, at relatively infrequent intervals, is to raise or lower the standard of real wages,* according to whether the long-run balance of payments situation is such that the Import Surplus needs to be increased or diminished, meanwhile allowing short-run fluctuations around this standard according to the state of the labour market.

(c) The Bank is to control the exchange rate so as to raise or reduce the External Price Level according to whether the Internal Price Level is falling or rising, on the basis of either short-run or long-run considerations (according to taste).

43. Clearly the greatest weakness of this system is the practical possibility that the Court may not be able effectively to control the "long-run" standard of real wages. If the Court is better able to control the "long-run" level of money wages—a doubtful hypothesis —*or* if Internal Price Stability is regarded as less important than External Balance, while the Money Wage Level is believed to be essentially "sticky", then it would be more satisfactory to make the Bank responsible for External Balance, leaving the Court to do what it can towards Internal Price Stability. But neither the Court nor the Bank can achieve External Balance, even in the long run, unless the Real Wage Level is in the long run effectively controlled—whether directly by the Court, indirectly *via* the Court's control of money wages and the Bank's of prices, or less tidily *via* "stickiness" of money wages and the Bank's influence on prices. A system in which demand policy responds quickly to the employment situation, and in which therefore wages cannot in the long run be made dependent on the state of the labour market, is unworkable unless some other means can be found by which real wages can be regulated, at least in the long run, in the interests of External Balance.

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* The reader is asked to recall the *ceteris paribus* assumptions set out in paragraphs 6 and 7.

THE BANKING FORMATION TABLE AND SUPPLY OF MONEY

I may fairly lay claim to be D.B.C.'s first Melbourne student. In December, 1924, I visited the Registrar's office at the University, to investigate possible courses, and was introduced to the new Professor of Commerce as a prospective student. I rode down with him into the city on the dummy of a cable tram, and during the ride decided to take the Commerce course. At the beginning, the course included a subject called Banking, Currency and Exchange, and among students B.C.E. with D.B.C. was quite popular. One of the themes I remember most clearly was the influence which movements in the balance of payments and official transactions had on bank deposits and advances in Australia. Over the years this student interest has remained with me and become something of a professional responsibility. It seemed to me, therefore, that it would be suitable to offer, on this occasion, an essay on the Banking Formation Table or, more particularly, on the way in which changes in international reserves, Government finance and Central Bank transactions affect the banking figures, particularly aggregate liquidity and the supply of money.

I am, of course, very much indebted to my colleagues in the Commonwealth Bank of Australia who have worked in this field, and helped me with details of the essay, and generally participated in the tribute to D.B.C.

I. *Definition*

As in most exercises of this nature, one must traverse the tedious but necessary ground of definition, to avoid misunderstandings in later discussion. The main components of the formation table which follows may be defined:

Overseas Funds held by Central Bank. Gold, bullion, overseas balances and foreign government securities. These figures differ from Australia's net gold and foreign exchange holdings, as shown in official statistics, by the amounts held by trading banks and governments.

Treasury Bills on Issue. Treasury bills issued by the Commonwealth Government other than "Internal Bills" ("Internal Bills" are issued to Commonwealth Trust Funds as an instrument of "internal" lending between government funds).

Government Deposits with Central Bank. All Australian Government deposits with Central Bank, both within Australia and overseas. It may be noted that not all State Government deposits are with the Central Bank.

Net Government Debt Outstanding in Australia. Government securities issued in Australia by the Commonwealth on behalf of

itself and the States (other than Treasury bills) excluding securities held as investments, usually of Trust Funds, by those governments themselves.

Other Assets of the Central Bank. Commodity advances of the Rural Credits Department, and cheques held for collection and in transit are included under this heading.

LGS Assets (Liquid assets plus Government securities). LGS assets comprise notes, coin, deposits with Central Bank (other than Special Accounts), Treasury bills and Commonwealth Government securities, both short and long term.

Aggregate Formation of LGS Assets (and Special Accounts of Trading Banks). This comprises LGS assets held by trading banks, savings banks and public together with Special Accounts (statutory deposits by trading banks with the Central Bank).

At this point, two warnings are perhaps necessary. First, the aggregate formation, as presented here, ignores changes in the composition of the net Government debt outstanding. Second, LGS asset holdings of the public are not the same as "public liquidity"; the public's LGS assets do not include deposits at banks and, on the other hand, "public liquidity" would not usually be defined to include Government securities.

Advances. These include loans, advances and bill discounted.

Deposits with Trading Banks. These are fixed and current deposits, including deposits by savings banks.

Other Assets and Other Liabilities of Trading Banks. Broadly, all assets other than LGS assets, Special Accounts and advances; and all liabilities other than deposits. Capital and reserves are included, along with working balances overseas, bills receivable and payable, inter-bank balances, loans to dealers in short-term money market, premises, cheques held for collection and remittances in transit, etc.

Money Supply. This covers notes and coin held by the public and all deposits with trading banks and savings banks. It differs from the concept "Volume of Money" in Australian statistics because the latter excludes deposits with trading banks by Governments and savings banks.

The formation table refers to changes in component money values over a period of time (generally the financial year). It may be regarded as presenting the monetary changes in the overseas, Government and private sector, although it will be appreciated from the above definitions (a) that the overseas sector is not quite complete; (b) that the government sector does not include all State government transactions; and (c) that in this case semi-governments and local governments are included in the private sector which in accordance with usage is referred to, perhaps misleadingly, as "the public".

The operations of the banking system are sub-divided into those of the Central Bank, the trading banks and the savings banks. This

division can be varied, for different purposes of analysis, to show the operations of the Central Bank; the major trading banks (the seven largest privately-owned trading banks and the Commonwealth Trading Bank); and the savings banks together with the other trading banks. Variations of this kind would not materially affect the theoretical basis of the formation table.*

In order to ease the task of showing the derivation of the formation table, the following symbols are used:

Coin on issue: C
Notes on issue: N
Treasury bills on issue: I
Net Government Debt outstanding in Australia: K
Overseas Funds held by Central Bank: F
Special Accounts of trading banks with Central Bank: Y
Deposits with Central Bank (other than Special Accounts): O
LGS asset holdings: LGS
Aggregate LGS assets of all banks, cash, Treasury bills and Government security holdings of the public and Special Accounts of trading banks: E
Capital and Reserves: R
Deposits: D
Other Liabilities: L
Total Liabilities: Z
Advances: X
Other Assets: A
Total Assets: M
Money Supply: W

In addition, subscripts have been used to refer components to particular holders, as follows:

Central Bank: $_c$
Trading Banks: $_t$
Savings Banks: $_s$
Public: $_p$
Government: $_g$

Thus, for example:

$$K = K_t + K_s + K_c + K_p.$$

II. *Derivation*

The formation table is essentially a regrouping and adjustment of items in the banking balance sheets. The adjustment largely takes the form of additions, to both sides of the balance sheet, of liquidity components which need to be included in the table.

* Nor, incidentally, would the changes introduced as a result of the recent banking legislation, in January 1960.

For aggregate formation of LGS assets (and Special Accounts of the trading banks) we must start with the Central Bank balance sheet. Since, for the Central Bank,

$$Z_c = M_c$$

we may write:

$$R_c + N + O + Y + L_c = F + C_c + I_c + K_c + A_c$$

Now add the following components of liquidity to both sides of this equation:

$$(C_t + C_s + C_p) = C - C_c$$
$$(I_t + I_s + I_p) = I - I_c$$
$$(K_t + K_s + K_p) = K - K_c$$

Then the assets side of the equation becomes:

$$F + C + I + K + A_c$$

On the liabilities side we have:

$$\begin{aligned} &R_c + (N_t + N_s + N_p) + (O_t + O_s + O_g) + Y + L_c \\ &+ (C_t + C_s + C_p) + (I_t + I_s + I_p) + (K_t + K_s + K_p) \\ &= (C_t + N_t + O_t + I_t + K_t) + Y + (C_s + N_s + O_s + I_s + K_s) \\ &\quad + (C_p + N_p + I_p + K_p) + (R_c + L_c + O_g) \\ &= (LGS_t) + Y + (LGS_s) + (LGS_p) + R_c + L_c + O_g \end{aligned}$$

$$\therefore E_t + E_s + E_p + (R_c + L_c + O_g) = F + C + I + K + A_c$$

Hence $E = F + (I - O_g) + K + (A_c + C) - (L_c + R_c)$

where $E = E_t + E_s + E_p$

Note: The net of Government Treasury bill indebtedness and its balances with the Central Bank $(I - O_g)$ is usually referred to as the "Government cash position", and similarly, K, net Government debt outstanding in Australia, may be shortened to "Government debt position".

The money supply formation table is derived, in much the same way, from the balance sheets of the trading banks and savings banks. These incorporate the items of liquidity already derived from the adjusted Central Bank balance sheet. We start with the aggregate liquidity appropriate to each sector of the banking system, and add the appropriate components of money supply. For the trading banks:

$$Z_t = M_t$$

So that $R_t + D_t + L_t = (LGS_t) + Y + X_t + A_t$

While for the savings banks

$$Z_s = M_s$$

So that $R_s + D_s + L_s = (LGS_s) + X_s + A_s$

$$\begin{aligned} \text{Now } W &= D_t + D_s + (C_p + N_p) \\ &= (LGS_t) + Y + (LGS_s) + (X_t + X_s) + (A_t + A_s) \\ &\quad - (R_t + R_s) - (L_t + L_s) + (C_p + N_p) \\ &= E_t + E_s + (X_t + X_s) + (A_t + A_s) - (R_t + R_s) \\ &\quad - (L_t + L_s) + (C_p + N_p) \end{aligned}$$

and $C_p + N_p = E_p - (I_p + K_p)$

$$\begin{aligned} \text{Hence } W &= E + (X_t + X_s) + (A_t + A_s) - (R_t + R_s) - (L_t + L_s) \\ &\quad - (I_p + K_p) \end{aligned}$$

The whole table may now be set out as follows:

Formation of Aggregate Bank Liquidity and Money Supply

Component	£m		Trading Banks	Savings Banks	Public
1. Overseas Funds of Commonwealth Bank.	F				
2. (a) Government Cash Position. (b) Government Debt Position.	(I − O_g) K				
3. Other net changes in miscellaneous Commonwealth Bank Accounts.	(A_c + C) − (L_c + R_c)				
4. Aggregate L.G.S. assets of all banks, cash, Treasury bills and Government Security holdings of the Public and Special Accounts of trading banks.	E = (LGS) + Y		E_t = (LGS_t) + Y = C_t + N_t + O_t + I_t + K_t + Y	E_s = (LGS_s) = C_s + N_s + O_s + I_s + K_s	E_p = (LGS_p) = C_p + N_p + I_p + K_p
5. Advances.	X_t + X_s		X_t	X_s	
6. Other assets of banks. Non-deposit liabilities of banks.	A_t + A_s −[(R_t + R_s) + (L_t + S_s)]		A_t −(R_t + L_t)	A_s −(R_s + L_s)	
7. *less* public holdings of Treasury bills and Commonwealth Government Securities.	−(I_p + K_p)				−(I_p + K_p)
	W				
8. Notes and Coin held by public. Deposits.			D_t	D_s	(C_p + N_p) (D_t + D_s)
Money Supply.					W

III. *Disquisition*

All this is rather arid algebra. It needs to be supplemented by justification and comment. A full and systematic story would be more arid than the algebra. But perhaps some brief observations might be added on a few themes—arbitrarily selected and designed to bring out points of interest and avoid issues of policy.

The main justification of the formation table is that it isolates the strategic components of aggregate liquidity and money supply. It provides a convenient analysis of current movements and a useful framework for forecasting, and links the banking aggregates with what is happening, or what is likely to happen, in international reserves, government finance, and Central Bank transactions, as well as the investment activities of the banking system.

As a general proposition we might say that the table shows the components which determine the supply of aggregate liquidity and money. With some qualifications (not usually of much consequence) this general proposition can be accepted for liquidity formation. But it is more difficult to present these components as determining the supply of money. What we are looking at is a flow of net transactions, which we examine at the end of arbitrary time intervals. This does not reveal the effects of any changes in the demand for money during the period. Look for a moment at trading bank advances. The movement in advances is shown net, gross drawings less repayments. The flow of repayments is clearly of great importance; it is influenced by a large number of things, particularly by changes in the rate of new capital raisings, and other movements which vary the flow of deposit funds becoming available to advance customers, as well as by changes in the demand for money. Thus a tendency, in the gross figures, for the supply of money to rise could easily be reduced or concealed in the net formation figures, by an increase in repayments of advances. In this respect, therefore, the general proposition needs to be qualified that the formation table shows the components of supply. In other respects, too, qualifications from the side of demand are important. A tendency for money supply to rise could be reduced by an increase in the public demand for Government securities; and, particularly if accompanied by some corresponding changes in income formation (as often happens) it could be reduced—perhaps with a lag—by an increase in imports. But there seems no need to enumerate all the qualifications. The proposition that the formation components determine the supply of money is true only generally; it is a kite which will fly only if it carries a heavy tail of qualifications.

Something should also be said about cancellations and compensations. There are some items which appear twice in the formation table, once as a debit, once as a credit. The most important item in this group is Government transactions overseas. Loan raisings overseas, for instance, would raise component F in the table, and reduce

component ($I - O_g$) by the same amount. This is true, generally, of all Commonwealth Government transactions overseas, and (with some exceptions) of State Government transactions overseas as well. These transactions therefore cancel and do not directly affect aggregate liquidity or money supply in Australia. What might be regarded as a cancellation with a lag occurs in the financing of commodities (notably wheat) through the Rural Credits Department of the Commonwealth Bank. The Rural Credits Department provides finance for the Wheat Board, which in turn makes payments to growers, causing a rise in aggregate liquidity and money supply, which is seasonal in occurrence. When proceeds from the sale of wheat are received, the Rural Credits advances to the Wheat Board decline. In the case of export sales, overseas funds increase, but the effect is then cancelled by the decline in the advances of the Rural Credits Department. In this case it might be said that the increase in liquidity and the money supply arising from payments to wheat growers is initially attributable to the increase in Rural Credits advances, although in the longer run it is represented by the export proceeds which tend to add to F. Over the period of a year, the net change in Rural Credits advances might be small, particularly if there had been no very great change in carry-over wheat stocks.

Compensations in the formation table are also important and complex. Compensations are changes in the gross movements of one component which set up, or are associated with, changes smaller in amount but different in direction in another component. The effect on advances of changes in the constituents of the balance of payments —exports, imports, and capital inflow—are of this compensatory kind; and the effect of changes in these constituents on Government receipts could also be cited, although the story here is somewhat mixed; and the list could be made longer. These compensatory tendencies help to restrain the movements in money supply, particularly in the short run; the compensatory restraints on movements in aggregate liquidity do not appear to be so strong.

An extremely important compensatory relationship in the formation table is between changes in the Government debt position and the Government cash position. Clearly there could be general movements in economic and financial conditions which would affect Government cash and Government loans in the same way, *e.g.* a general deflation. Again, it is theoretically possible that a change in loan raisings, unless it had been expected, could sometimes lead to a review of Government expenditure. However, especially in the short period, a reasonable presumption would be that a change in the Government loan position would lead merely to a compensatory change in Government cash, and the total of the two Government components in the formation table would remain the same, *i.e.* $K + (I - O_g)$ would be constant. If we make this assumption a change in the movement in K would not result in a change in E.

There could, of course, be changes in the distribution of E, which would depend on the origin of the changes in K, in particular whether the increased loan raisings came from the trading banks, the savings banks or the public.

If the trading banks were merely transferring part of their liquid holdings into Government securities, *i.e.* reducing O_t, then K would rise; on our assumption $(I - O_g)$ would fall by the same amount, and E and E_t would remain unchanged. If, however, the trading banks were investing some accession of funds (let us say an increase in F causes an increase in E and E_t) then $K + (I - O_g)$ would remain constant, and the increase in E_t would be represented by an increase in the Government security holdings of the trading banks.

If the savings banks were responsible for the movement in K, then similar results would follow. The savings banks might, like the trading banks, be drawing on their own deposits with the Central Bank, O_s; sometimes, however, they might be drawing on their deposits with the trading banks, and therefore indirectly on O_t. In the latter case, E would remain unchanged (LGS_t) and D_t fall while (LGS_s) would rise; A_s would fall and D_s would not be changed.

Subscriptions to Government loans from the public have similar and rather more complicated effects. If the public draws on deposits with the trading banks, D_t and (LGS_t) fall. However, E will remain unchanged, because the fall in (LGS_t) will be offset by the increase in securities held by the public.

In all these cases E remains unchanged, and what is mainly of interest is the change in distribution. But E is unchanged because we have assumed $K + (I - O_g)$ remains constant. If, because of a fall in loan raisings, Government expenditure was in fact reduced (or Government revenue increased) by say Δ E, then aggregate LGS assets (and Special Accounts of trading banks) would also change by Δ E. If the change in loan raisings came from the public, (LGS_p) would change without any change in money supply W; if the change came from the trading or savings banks, W would also change.

It might be useful to tabulate for the trading banks and the money market the formation effects of various kinds of security transactions. Consider first the trading banks; if they are investing liquid funds we can set out the table shown at the top of the next page.

Transactions with non-Government holders will not necessarily affect K, but will result in a redistribution of securities and liquidity. It is true that the new holder of liquidity may wish to subscribe to Government loans, and it cannot be assumed that K will not be indirectly affected. The effect of Government security transactions between the trading banks and public is also of some interest; the banks, it will be noticed, can raise (LGS_t) and also D_t, by this type of transaction, which means that their LGS ratio will rise.

We might also usefully tabulate the effects of money market

Securities from	E	E_t	D_t	W
Government (assuming $K+(I-O_g)$ is constant)	0	0	0	0
Government (assuming $K+(I-O_g)$ is increased)	+	+	+	+
Central Bank	0	0	0	0
Savings Banks*	0	0	0	0
Public	0	+	+	+

*Results shown for savings banks in this, and the following, tabulation ignore possible secondary effects on banking aggregates if savings banks were to hold the proceeds from the sale of their securities in a form other than liquid assets (*i.e.* $N_s+C_s+O_s+I_s$).

transactions in Government securities on the various aggregates. Money market dealers (who are defined as part of the "public" for formation purposes) could obtain funds and market securities from a number of sources, and the actual effects of dealers' operations on liquidity would depend upon combinations of sources of funds and sources of securities. The following table sets out some possible combinations:

Possible Money Market Operations

If money market funds came from:

	Trading Banks						Public					
Securities obtained from	E	E_t	E_s	E_p	W	D_t	E	E_t	E_s	E_p	W	D_t
Government assuming $K+(I-O_g)$ is constant	0	−	0	+	0	0	0	−	0	+	−	−
Government assuming $K+(I-O_g)$ increases	+	0	0	+	+	+	+	0	0	+	0	0
Central Bank	0	−	0	+	0	0	0	−	0	+	−	−
Trading Banks	0	−	0	+	0	0	0	−	0	+	−	−
Savings Banks	0	−	0	+	0	0	0	−	0	+	−	−
Public	0	0	0	0	+	+	0	0	0	0	0	0

It may be helpful to describe the transactions and their consequences in the case shown in the first line of the table, when dealers borrow funds from the trading banks. With the funds subscribed by dealers the Government reduces the Treasury bill issue, holding $K+(I-O_g)$ constant. E_t falls because trading banks have reduced their LGS assets. Hower, E_p (the public's holdings of LGS assets, in this case Government securities) rises when the dealers acquire the securities so that E is unchanged. Bank deposits and money supply are not affected by the transactions.

A number of conclusions may be drawn from this tabulation:

(1) Money market operations have no net effect on E, except in the case where the market dealers subscribe to Commonwealth loans and the Treasury bill issue is not correspondingly reduced.

(2) There is a net decline in E_t except when the market dealers purchase securities from the public or subscribe to Commonwealth loans (without a corresponding reduction in the Treasury bill issue).

(3) The effects on E, E_t, E_s, E_p are the same whether funds for the market are derived from the public or from trading banks.

(4) There can be some deposit creation if trading banks provide funds for the market. It is to be observed that, on our definition, funds lodged with the market are not counted as deposits.

It was suggested that the formation table can be used for two purposes—analysis and forecasting. In analysis perhaps we may distinguish three separate functions:

1. To trace the cause of change in aggregate liquidity. This is important both in general and cyclical sense; and over a long period changes in the ratio $\frac{F}{E}$ have quite important policy aspects.

2. The source of change of E is also linked with changes in distribution of E, and changes in the ratio $\frac{E_t}{D_t}$. As we have seen, however, changes in distribution can occur—they are often of some magnitude—without any change in E, and may be usefully studied in a formation setting.

3. The formation approach is useful in concentrating attention on what happens to the banking system as contrasted with what happens to individual banks. It is very easy to fall into error by applying to the banking system as a whole generalizations based on the experience of an individual bank. The most common error is to argue that, because a trading bank loses LGS assets when it expands its advances, all trading banks will lose LGS assets by expanding advances. The point is that the LGS assets which one bank loses will be gained by other banks and the aggregate LGS assets of the trading banks will not necessarily fall. It is true, of course, that the expansion of advances creates more deposits, and therefore the ratio $\frac{LGS_t}{D_t}$ will fall, for the banking system; but there will not necessarily be any *direct* loss to the system of LGS assets.

This brings up another important proposition which flows from the formation approach. The trading banks are not able, generally, to affect by their own efforts the aggregate liquidity of the system.

The only factors which generally affect aggregate bank liquidity, as we have defined it, are international reserves, Government finance and Central Bank transactions, and the trading banks are in general not able, *directly*, to influence changes in these components. Some exceptions must be admitted to this general principle. There is the possibility that (LGS_t) might be raised by purchasing securities from the public; something might be made of the theoretical possibility that increases in banks' loan subscriptions could raise K without affecting ($I - O_g$); and there is also a possibility that banks could, in some circumstances, give a bias to their operations in order to encourage the flow of exports and the inflow of capital; on the other side, they could sometimes reduce their liquidity by encouraging additional imports. Generally speaking, however, the effects of bank operations on the constituents of the balance of payments are indirect, and in Australia, at any rate, usually subject to time lags.

Is it reasonable to propose a similar general principle for the supply of money, viz., that the public is not able, generally, to affect by its own efforts the aggregate supply of money? Even with qualifications, this is much more difficult. We have already noted the important point about repayments of advances, and additional subscriptions to Government loans. But arguments about the "loss of money" or "loss of deposits" should always be tested on the formation table. Consider, for instance, the flow of funds between trading banks, on the one hand, and savings banks and, say, hire purchase companies, on the other.

Flow of funds into savings bank deposit accounts would result in the first instance in a temporary loss of trading bank liquidity and deposits. Savings banks would, of course, invest the increase in their funds, and there would be a flow back of liquidity and deposits to the trading bank system except to the extent that the savings banks increased their liquid asset holdings, purchased securities from the Central Bank, or subscribed to Commonwealth loans, with a corresponding fall in ($I - O_g$).

Broadly, the initial loss of deposits by trading banks would be largely offset by the effect of the investment of the funds by savings banks. Similarly, funds deposited by the public with hire purchase companies flow back to the banking system when the hire purchase companies invest the funds. Overall trading and savings bank deposits would probably remain little changed except to the extent that hire purchase companies used part of their increased funds to increase their holdings of notes and coin, to repay bank advances, to purchase securities from the Central Bank, either directly or through dealers, or to subscribe to Commonwealth loans with a corresponding reduction in ($I - O_g$).

These leakages would be relatively unimportant in the case of hire purchase companies, and usually there would not be any appreciable loss of bank deposits. It is true that deposits of the public both

with banks and non-bank financial institutions, together, would be greater, and it is important to observe that the volume of transactions could also have increased.

The other point about the formation table is that it provides a useful framework within which to make forecasts of the banking aggregates. Formation forecasting is still a relatively new technique, and most people who have tried their hand at it would agree that it is beset with many difficulties, both theoretical and statistical. Compensations present obvious problems in forecasting; and where any sharp deviation occurs from current trends the forecaster has to guess whether the authorities will move to contain or cushion the deviation. It would be useful to bring formation forecasting into closer relationship with national income forecasting, to weigh together common components, to watch the relative rate of growth of liquidity, money and income, and to consider the implications for the banking system of changes which have already occurred or are likely to occur in incomes. Finally, the formation table can be elaborated, to take account of changes in the composition of aggregate liquidity, and to incorporate some other elements of liquidity in the hands of the public which are not included in the definition of money supply.

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STATE CAPITAL DIFFERENCES IN THE BASIC WAGE

The Australian concept of a basic wage fixed by governmental arbitration authorities has its formal origin in the "Harvester" wage determined by the Commonwealth Arbitration Court in 1907. The basic wage is probably best considered as the basic amount in any arbitration award to which margins for skill and other factors are added. It is not a minimum below which it is illegal to pay any adult male employee, though it usually is a legal minimum for specified organized groups of employees.

In its early years the basic wage was in fact only applicable to the more highly organized groups who were thus in what may be considered a "privileged" position. It is only of recent years that it has become almost universally applicable and, in that sense, tended to become an actual minimum wage.

I. Overall Basic Wage Movements

The Commonwealth basic wage, over the first 46 years of its history, was an amount determined at fairly long intervals but automatically varied at much more frequent intervals in accordance with variations in an index of retail prices. Over the last six years the automatic variations have been replaced by an annual determination. The various phases in this development have been as follows.

1907 to 1922.—The 1907 amount of 42/- a week was varied from time to time in accordance with the "A" Series retail price index by equating the index of 1000 in 1911 calendar year to 48/-. The first variation on the retail price basis was made in 1913, and up till 1918 the index number for the calendar year prior to the date of the award was used. Thus the time lag from the mid-point of the year to the operation of the new award varied from about seven to nineteen months. Each award operated for some years, so that the actual time-lag was much longer. Towards the end of 1918 the practice was adopted of using the average index for the four quarters preceding the award. This reduced the time-lag in the commencement of the new wage to about seven to ten months.

Meanwhile the practice had grown up of making agreements outside the Court for automatic adjustments. Under agreements for quarterly adjustments of this nature, the time-lag between the mid-point of the index number year and the mid-point of the wage period could be reduced to 8½ months (allowing for one month between the end of the index number period and the operation of the adjusted wage). This principle was first adopted by the Court in 1921 so that the basic wage became the "A" series index for the average of the last four quarters multiplied by 48/-, with a time-lag of 8½ months.

1922 to 1st February, 1931.—At the end of 1921 the index basis for the basic wage began to be shifted from the average of the last available four quarters to the figure for the last available quarter. At the same time the practice arose of adding a flat 3/- to the wage

so determined. In the Gas Employees' award (16 C.A.R. 4) Mr. Justice Powers fixed a wage of 85/- to be varied (after six months) in accordance with variations in the "A" Series retail price index from the September quarter, 1921. The rate had last been based on the year ended June 30, 1919, at 66/-, although the true equivalent would have been 67·3/-. The equivalent of the 66/- for the year ended September 30, 1921, was 85·1/- (true equivalent 86·8/-), while the true equivalent for the September quarter 1921 was 81·5/-. Mr. Justice Powers called this 82/-, and the difference between the 82/- and the year ended September 30, 1921, figure of 85/- is the origin of the 3/- flat addition which was generalized into later awards.

It will be noted that, on the old principles, the correct award would have been 86·8/- and that the change to a quarterly basis would have reduced this to 81·5/-. The 3/- was therefore an amelioration of the 5·3/- fall which would have occurred because of changed adjustment procedures. It will be noted, too, that the addition was made at a time when prices were falling sharply and tended to mitigate the fall in money wages from this cause. Glosses in subsequent judgments led to the belief (as expressed in the Labour Report for 1958) that the 3/- was added "for the purpose of maintaining, during a period of rising prices, the full equivalent of the 'Harvester' standard". It should be noted that prices were more or less stable from 1923 to 1929 but that the 3/- addition was preserved. The 3/- can only be regarded as a real increase in the basic wage. It was not, in fact, a mere device to preserve the basic wage in times of rising prices.

Following this judgment, automatic adjustments were made to the nearest 6d. by varying the last award in accordance with variations from the date of the award in the "A" Series index. In 1928 a new adjustment procedure of making the wage the actual equivalent of the "A" Series index (1000 in 1911 equals 48/-), but to the nearest shilling, began to be adopted.

The position from 1922 to February, 1931, may therefore be summarized as follows. The basic wage was the "A" Series index for the last quarter multiplied by 48/- plus a flat addition of 3/-, the time-lag being four months. (The figures for the basic wage shown in Table I assume that the wage up to April, 1934, was based on the "A" and "D" Series retail prices calculated to the nearest 6d.).

1st February, 1931, to 1st May, 1933.—The basic wage was calculated on exactly the same basis as in the previous period, but a deduction of 10% was made and the result shown to the nearest penny.

1st May, 1931, to 1st May, 1933.—The calculation was on the same basis as in the previous period except that the "D" Series of retail prices was used instead of the "A" Series. The time-lag was increased from four months to seven months. The "D" Series was the "A" Series for the December quarter, 1929, varied by movements in the "C" Series between the 1929 four-quarter average and the current quarter. It will be noted that the "D" Series was not a

properly grafted index. Either the two December quarters or the two calendar years should have been used for the graft. But apparently neither correct procedure gave the results the Court wanted. Provision was also made for varying the 3/- flat addition. The combined figure for the basic wage was, in fact, equivalent to that obtained by multiplying the "C" Series index on the base 1923-27 = 1000 by the following amounts:

Sydney	80·19/-
Melbourne	79·77/-
Brisbane	78·94/-
Adelaide	75·72/-
Perth	73·29/-
Hobart	77·87/-
Six Capitals	78·94/-

but with some slight variation due to rounding to the nearest 6d. before deducting 10% from the "D" Series equivalent.

1st May, 1934, to 1st December, 1946.—The basic wage was calculated to the nearest shilling on the basis that the "C" Series index 1923-27 = 1000 was equal to 81/-. The time-lag was reduced to five months from 1st May, 1934, and to four months from 1st February, 1940. From 1st June, 1934, to 1st July, 1937, it was provided that no variation should be made unless the figure indicated by the index differed from the existing figure by 2/- or more. It was also provided that the Adelaide figure should be reduced by 3/- until 1st December, 1934, 2/- until 1st March, 1935, and 1/- until 1st June, 1935. The Hobart figure was to be reduced by 2/- until 1st December, 1934, and 1/- until 1st June, 1935.

Flat additions of 3/- for the three larger capitals (and the six capitals) and 2/- for the three smaller capitals were made from 1st July, 1937, and 6/- for the three larger, 4/- for the three smaller and 5/- for the six capital average from 1st October, 1937.

1st December, 1946, to 1st December, 1950.—The basis of the wage was increased to make the "C" Series index 1923-27 = 1000 equal to 87/-. The flat additions of 6/-, 4/- and 5/- continued to be made.

1st December, 1950, to 1st November, 1953.—The basis of the wage was increased to make the "C" Series index 1923-27 = 1000 equal to 103/-. The flat additions were abolished.

1st November, 1953, to date.—The basic wage rates ruling in August to October, 1953 (based on the "C" Series for the June quarter, 1953) were maintained unaltered except for flat additions. These additions were:

From 1st June, 1956	10/-
From 15th May, 1957	20/-
From 21st May, 1958	25/-
From 11th June, 1959	40/-

Summary

The main features of Commonwealth basic wage determination may be summarized as follows:

Date	Index and Base	Equivalent	Time-Lag months	Flat Addition
to 1922	"A" 1911	48/-	8½+	nil
from 1922	"A" 1911	48/-	4	3/-
from 1/2/31	"A" 1911	43·2/-	4	2/8½
from 1/5/33	"D" 1911	43·2/-	7	2/- to 2/3†
from 1/5/34	"C" 23-27	81/-	5	nil*
from 1/7/37	"C" 23-27	81/-	5	2/- to 3/-
from 1/10/37	"C" 23-27	81/-	5	4/- to 6/-
from 1/2/40	"C" 23-27	81/-	4	4/- to 6/-
from 1/12/46	"C" 23-27	87/-	4	4/- to 6/-
from 1/12/50	"C" 23-27	103/-	4	nil
from 1/11/53	None	n.a.	n.a.	nil to 40/-

n.a. Not applicable.
†Actually variable with the index.
*Reduction of up to 3/- for Adelaide and 2/- for Hobart until 1/6/35.

The methods of determination described above were applied uniformly (with the stated minor exceptions) to the relevant retail price index number for each of the six capitals and for the six capital average to give the appropriate basic wage. The actual average Commonwealth basic wages paid in each financial year from 1923-24 is shown in Tables I and II.

Basic wages were also fixed by four State tribunals at amounts differing from the Commonwealth wage for varying periods up to 1952-53. After the abolition of automatic quarterly adjustments in 1953, Victorian and Tasmanian tribunals also fixed a State basic wage at a different level for varying periods. These State basic wages are shown in Tables I and II.

The tables also show the most comprehensive available retail price index from 1923-24 to date and the six capital basic wage expressed in 1952-53 shillings. The index used is the "C" Series from 1923-24 to 1952-53 and the interim index (including potatoes and onions) from 1952-53 to date.[1] In addition, Table 2 shows the Commonwealth basic wages as they would have been if the automatic adjustment formula had not been abolished.

The basic wage in constant prices divides naturally into a number of periods of relative stability. If we take the eight years 1923-24 to 1930-31 as a base—a period in which both prices and methods of fixing the wage were fairly constant—the real wage for the six capitals fluctuated around 195/3d. over the period, with a maximum

1. The approximate "C" Series index (4 and 5 roomed houses) for earlier years on the 1952-53 base was as follows:

1914-15 ..	312	1917-18 ..	376	1920-21 ..	510
1915-16 ..	349	1918-19 ..	406	1921-22 ..	446
1916-17 ..	353	1919-20 ..	461	1922-23 ..	437

Commonwealth and State Basic Wages—1923-24 to 1952-53

Year	Sydney		Melbourne	Brisbane		Adelaide		Perth		Hobart	Six Capitals—Commonwealth		
	C'wlth	State	C'wlth	C'wlth	State	C'wlth	State	C'wlth	State	C'wlth	Price Index (a)	Actual	52–53 Prices
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.
1923–24	86 10	81 5	87 8	76 1	80 0	84 0	78 7	77 6	None	88 4	443	85 2	192 2
1924–25	85 3	82 0	84 9	74 1	80 0	84 5	82 0	79 3	,,	86 2	437	83 9	191 7
1925–26	88 4	83 8	87 4	77 11	83 9	86 3	85 1	80 7	,,	86 8	446	86 2	193 3
1926–27	91 6	84 0	89 4	82 3	85 0	86 5	85 6	81 6	85 0	87 11	443	88 8	200 1
1927–28	91 0	83 8	88 7	79 7	85 0	87 0	85 6	80 0	85 0	84 7	447	87 10	196 8
1928–29	91 10	82 6	87 1	79 10	85 0	86 1	85 6	84 6	85 0	83 4	451	87 11	194 10
1929–30	94 6	82 6	89 3	80 2	85 0	87 4	85 6	84 9	87 0	85 8	450	89 11	199 11
1930–31	83 11	82 6	78 3	67 8	78 11	74 5	78 6	74 9	83 4	77 6	408	78 10	193 5
1931–32	70 9	82 6	64 6	59 2	74 0	59 9	64 3	62 11	74 7	65 8	375	65 10	175 9
1932–33	67 8	71 6	62 2	57 4	74 0	57 6	63 0	59 11	70 6	64 7	358	63 3	176 8
1933–34	67 1	67 4	63 1	59 7	74 0	59 11	63 0	60 7	69 2	64 5	358	63 10	178 1
1934–35	68 0	67 8	64 8	62 0	74 0	63 0	63 0	67 10	70 11	66 4	364	66 0	181 4
1935–36	69 2	68 7	66 0	63 2	74 0	66 2	64 11	68 0	70 6	69 0	371	67 2	181 0
1936–37	70 2	69 11	67 9	65 4	75 0	68 2	67 7	69 9	72 11	69 0	382	68 8	180 0
1937–38	77 7	76 9	75 8	73 1	78 9	73 3	72 3	74 1	74 10	74 8	391	75 5	192 9
1938–39	80 6	C'wlth	78 7	75 2	81 0	76 0	75 11	75 11	81 2	76 1	403	77 8	192 7
1939–40	81 11	,,	81 0	76 9	83 8	77 7	78 0	77 0	82 2	77 5	412	79 5	192 9
1940–41	86 1	,,	84 10	80 4	85 3	80 10	81 6	80 1	85 10	81 6	436	83 6	191 7
1941–42	90 1	,,	88 7	84 10	89 3	84 10	85 9	84 11	90 3	85 11	461	87 5	189 6
1942–43	96 7	,,	96 3	90 5	93 5	92 1	92 0	90 7	96 8	92 3	497	94 6	190 2
1943–44	99 2	,,	97 10	93 2	96 10	93 6	94 0	93 5	100 5	94 6	498	96 9	194 3
1944–45	98 10	,,	97 11	93 0	97 0	93 0	94 0	93 3	99 11	93 7	498	96 0	192 10
1945–46	98 8	,,	98 0	93 2	97 0	93 5	94 0	93 11	100 2	94 1	501	96 2	191 10
1946–47	105 0	,,	103 5	99 1	102 6	99 2	99 1	99 5	103 8	100 6	513	102 5	199 6
1947–48	112 6	,,	110 7	106 0	110 1	106 7	105 0	106 2	111 7	107 10	546	109 7	200 8
1948–49	122 4	,,	120 5	115 6	119 6	116 8	117 9	115 8	121 9	118 2	599	120 1	200 4
1949–50	132 10	,,	131 5	124 11	128 11	126 8	127 0	128 8	137 5	128 8	655	130 1	198 6
1950–51	159 11	,,	157 4	148 1	149 4	152 2	C'wlth	154 2	160 8	153 0	748	156 6	209 4
1951–52	206 2	,,	199 4	188 1	187 9	195 5	,,	197 10	207 3	198 7	917	200 5	218 8
1952–53	236 3	,,	226 7	214 5	214 10	225 1	,,	226 1	236 3	228 8	1000	229 3	229 3

(a) "C" Series

TABLE II

Commonwealth and State Basic Wages—1953-54 to August 1959

	1953–54	1954–55	1955–56	1956–57	1957–58	1958–59	Aug. '59
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Sydney							
C'wealth—Actual ..	242 10	243 0	243 10	254 3	263 7	268 7	283 0
" —Formula ..	244 10	245 4	252 10	267 9	269 11	274 4	277 0
State	C'wlth Act.	C'wlth Act.	250 8	C'wlth Form.	C'wlth Form.	C'wlth Form.	C'wlth Form.
Melbourne							
C'wealth—Actual ..	234 9	235 0	235 10	246 3	255 7	260 7	275 0
" —Formula ..	236 4	235 6	246 8	265 6	264 4	268 5	276 0
State	236 2	C'wlth Form.	C'wlth Form.	262 5	263 0	263 0	C'wlth Act.
Brisbane							
C'wealth—Actual ..	217 11	218 0	218 10	229 3	238 7	243 7	258 0
" —Formula ..	221 4	223 5	228 11	239 9	242 9	257 0	263 0
State	222 2	225 0	229 0	239 1	242 9	257 2	263 0
Adelaide							
C'wealth—Actual ..	230 9	231 0	231 10	242 3	251 7	256 7	271 0
" —Formula ..	232 4	235 4	243 10	254 8	254 2	263 9	270 0
State	C'wlth Act.	C'wlth Act.	C'wlth Act.	C'wlth Act.	C'wlth Act.	C'wlth Act.	C'wlth Act.
Perth							
C'wealth—Actual ..	235 7	236 0	236 10	247 3	256 7	261 7	276 0
" —Formula ..	238 1	256 4	264 9	275 6	281 1	283 6	289 0
State	246 1	246 6	253 0	264 7	270 10	272 11	278 7
Hobart							
C'wealth—Actual ..	241 9	242 0	242 10	253 3	262 7	267 7	282 0
" —Formula ..	249 3	247 5	256 5	275 9	277 4	282 6	287 0
State	242 9	C'wlth Act.	250 7	271 8	272 0	272 0	C'wlth Act.
Six Capitals—C'wealth ..							
Actual	235 10	236 0	236 10	247 3	256 7	261 7	276 0
Formula	238 3	239 10	248 6	263 9	264 11	270 8	276 0
Price Index—							
52–53=1000 (a) ..	1025	1036	1080	1143	1156	1185	1205
Actual—52-53s.d.	230 1	227 9	219 3	216 4	222 0	220 8	229 0

(a) Interim—including potatoes and onions

some 2½% higher. For the six years 1931-32 to 1936-37 the wage was about 8½% lower than the base period, and for the nine years 1937-38 to 1945-46 some 1½% lower. The increase in December, 1946, raised the wage for the four years to 1949-50 to 2½% above the base and about equal to the peak level of the 'twenties. The further increase in December, 1950, brought it to 17½% above the base for 1952-53 to 1954-55, but the abolition of quarterly adjustment has reduced the increase to some 12½% for the last four years.

If we can, in fact, accept the "C" Series and Interim retail price indexes as a reliable measure of purchasing power, it follows that the six capital basic wage has shown a real increase of only about 12½% over some thirty years, and that practically all this increase has occurred since 1950. The 10% cut in the depression was not effectively restored until after the 1939-45 war.

II. *Actual State Differences in the Basic Wages*

The Commonwealth Court has, with two exceptions, always fixed the basic wage in each State capital at the same real level *if* we accept the price index used by the Court for the time being as a true measure of purchasing power. The exceptions were (i) from 1st July, 1937, to 1st December, 1950, when the wage for Adelaide, Perth and Hobart was 2/- lower than for the other three capitals (1/- for the first quarter of the period); and (ii) since 1st November, 1953, when automatic adjustments were abandoned.

Over the 1937-50 period the percentage reduction in the real basic wage for the three smaller capitals was some 2·7% at the beginning and some 1·6% at the end. Since 1953 the differences are perhaps best shown as the maximum average annual reduction below the "formula" wage and the relationship to the "formula" wage for August, 1959. The actual data is given in Table II.

	Maximum	1959 August
	%	%
Sydney	—5·0	+2·2
Melbourne	—7·3	—0·4
Brisbane	—5·2	—1·9
Adelaide	—4·9	+0·4
Perth	—10·6	—4·5
Hobart	—8·2	—1·7

It will be noted that inter-capital differences are now, in terms of the "C" Series, appreciably greater than in the earlier period.

This comparison is based on the assumption that the retail price series ("A" or "D") actually used by the Court was the best available measure up to 1934 when the "C" Series was adopted. This was not the view of the Statistician who made first the "B" and then the "C" Series available.

If we measure the wages actually awarded by the Court in terms of the "C" Series, we get two periods when the relationship to the "C" Series was relatively constant—from July, 1923, to December, 1925, and from January, 1925, to December, 1929. The break in the relationship arose primarily from an unexplained alteration in measuring rent which materially altered relativities between the December quarter, 1925, and the March quarter, 1926.

After the end of 1929, the relationship between the wages awarded and the "C" Series altered fairly rapidly as prices fell in the depression. With the introduction of the "D" Series a fixed relationship was established. The "C" Series 1923-27 base equivalents were as follows. These are the equivalents for the adjustable portion of the wage only and exclude the "Powers' 3/- " for the first three periods and the 10% cut for the December quarter, 1932.

	July 1923 to Dec. 1925	Jan. 1926 to Dec. 1929	Dec. Qtr. 1932	"D" Series
	s.	s.	s.	s.
Sydney	82·6	85·4	83·6	80·2
Melbourne	84·5	85·7	80·5	79·8
Brisbane	79·4	83·6	78·4	78·9
Adelaide	80·4	81·6	74·7	75·7
Perth	77·3	79·3	75·1	73·3
Hobart	81·2	82·3	81·3	77·9
Six Capitals	82·3	84·4	80·7	78·9

The relationship between the real wage ("C" Series basis) in Sydney with Melbourne and Brisbane, and in Melbourne with Adelaide, Perth and Hobart, was as follows.

	July 1923 to Dec. 1925	Jan. 1926 to Dec. 1929	Dec. Qtr. 1932	"D" Series
Sydney = 1000				
Melbourne	1023	1004	963	995
Brisbane	960	979	938	984
Melbourne = 1000				
Adelaide	951	952	927	949
Perth	914	925	933	919
Hobart	961	960	1010	976

It will be observed that the "D" Series substantially restored the 1926-29 relativities—and this, indeed, was stated to be its purpose. The introduction of the "C" Series from May, 1934, of course resulted in equality of real wages for all six capitals *as measured by* the "C" series.

In the earlier period Melbourne real wages were 2½% higher than Sydney, but fell to ½% higher in 1926-29. The depression changes cut the Melbourne wage to 3½% below Sydney, but this cut was almost entirely restored by the "D" Series. The introduction of the "C" Series resulted in only a ½% further relative increase for Melbourne.

In Brisbane, real wages were 4% below Sydney in the earlier period, 2% below in 1926-29, and some 6% below by December, 1932. The "D" Series reduced the discrepancy to 1½%, which was, in turn, removed by the "C" Series.

Adelaide real wages, after being 5% below Melbourne up to 1929, fell to 7% below by December, 1932. The "D" Series restored them to 5% below, and the "C" Series resulted in a 5% relative increase. Perth real wages were from 6½% to 8½% below Melbourne throughout, and the "C" Series gave an 8% increase. In Hobart, after being 4% below Melbourne up to 1929, real wages rose to 1% above by December, 1932. The "D" Series cut them to 2½% below Melbourne, the cut being restored by the "C" Series.

In the following paragraphs the money basic wage story—Commonwealth and State—for each of the six capitals is put together. For convenience of exposition, and because of relative proximity, Melbourne and Brisbane are compared with Sydney, and Adelaide, Perth and Hobart with Melbourne.

Sydney. Movements relative to Melbourne are described under the Melbourne heading. The State money wage in Sydney was about 5% below the Commonwealth wage from 1923-24 to 1925-26. It then fell to 12½% below by 1929-30, but the State Court made no money cut as the depression deepened as compared with the full automatic adjustment and 10% cut of the Commonwealth Court. As a result, the State wage was 20% above the Commonwealth by July, 1932. It was then cut by 15%, and by the end of 1932-33 was only about 1% above. The State wage was maintained at within 1% of the Commonwealth until 1937-38 when the Commonwealth wage was fully adopted by the State Court.

The State Court at first followed the Commonwealth Court in abolishing automatic adjustments in 1953, but in November, 1955, it raised the State wage by 4% to the equivalent of the automatically adjusted Commonwealth wage. Since then it has maintained it at the "formula" wage which was 5% above the Commonwealth in 1956-57, and 2% above in the next two years. By August, 1959, however, the "formula" wage had fallen to 2% below the Commonwealth wage.

Melbourne. The Melbourne Commonwealth basic wage was slightly above the Sydney wage in 1923-24 but fell progressively to 9% below in 1931-32. Thereafter there was a recovery to about 1% below by 1939-40. From then until 1949-50 the relative wage remained at this level, but dropped to about 4% below in 1952-53 and 3% below in 1953-54. The abolition of automatic adjustments has kept the Melbourne money wage 3% below Sydney since that date.

The progressive decline in the relative Melbourne Commonwealth wage during the 'twenties was roughly matched by the decline in the Sydney State wage which was some 5% below Melbourne through-

out the period. As mentioned under Sydney, the maintenance of the money level of the Sydney State wage meant that by 1931-32 the Melbourne wage was 22% lower. This special position ended with the fixing of the Sydney State wage at the Sydney Commonwealth level.

In the period since the Commonwealth abolition of automatic adjustments, the Melbourne industrial authorities followed the "formula" wage until August, 1956. From then until June, 1959, the wage remained constant, but in June and July, 1959, it was raised to the Commonwealth actual wage for Melbourne. The greatest discrepancies for any one year were in 1956-57, when the Melbourne State wage was 6½% above the Melbourne Commonwealth wage, and 3% above the Sydney Commonwealth wage. In the same year it was 2% below the Sydney State wage. On the August, 1959, figures, Melbourne and Sydney State and Commonwealth wages are all almost the same.

Brisbane. The Brisbane Commonwealth wage was from 10% to 15% below the Sydney wage until 1928-29, then dropping rapidly to 19% below in 1930-31. A rapid recovery to about 6% below occurred in the next seven years, and from 1937-38 to 1949-50 the relative wage remained at this level. It then dipped to 10% below Sydney in 1952-53, and has since been maintained at this level by the abolition of quarterly adjustments.

The Brisbane State wage was kept at about 5% above the Commonwealth wage until 1929-30. This meant that it fell from 6% below to 10% below the Sydney Commonwealth wage, but rose from 2% below to 3% above the Sydney State wage. The State wage was reduced by only 13% in the depression, the whole fall occurring between August, 1930, and July, 1931, and was then kept constant until April, 1937. As a result the State wage reached a peak of 24% above the Commonwealth wage in 1933-34. In that year it was 10% above the Sydney Commonwealth and State wages.

By 1938-39, the Brisbane State wage was only 7% above the Commonwealth wage and 1% above the Sydney wage. From then until 1949-50 it fell to about 3% above the Commonwealth wage and to 3% below the Sydney State and Commonwealth wage.

After the abolition of quarterly adjustments, the State Court fixed the wage at very close to the "formula" wage. As a result, it rose to about 5% above the Commonwealth wage in 1958-59 when it was 4% below the Sydney Commonwealth and 6% below the Sydney State wage. In August, 1959, the State wage was 2% above the Commonwealth, 5% below the Sydney State, and 7% below the Sydney Commonwealth.

Generally, the Queensland Court has been able to fix the State wage at roughly 5% above the level fixed by the Commonwealth Court, and at the same time to have a money wage roughly 5% below Sydney. Over the war and immediate post-war period, both figures

were about 3%. This "half-way" relationship was only disturbed during the depression and the 1950 and 1951 inflation when the State Court was slower than the Commonwealth to vary the wage.

Adelaide. The Adelaide Commonwealth wage fluctuated around 2% below the Melbourne wage until 1929-30, and then fell rapidly to 7½% below in 1931-32 and 1932-33. A recovery to slightly above equality had occurred by the time of the 1937 Commonwealth judgment. This judgment fixed the real wage at about 2½% below Melbourne, but the trend of prices was such that the money wage remained fairly constant at some 3% to 5% below the Melbourne wage until 1950-51. The abolition of the 1937 differential from December, 1950, lifted the relative wage to 1½% below Melbourne, and this relationship has been maintained by the abolition of quarterly adjustments.

The Adelaide State wage, before the depression, was kept about 2% below the Commonwealth wage but, like the other State wages, was not cut so severely in the depression. Its peak relative level occurred in 1932-33 when it was 1½% above the Melbourne wage and 9% above the Adelaide Commonwealth wage. By 1935-36, however, the old relationship had been re-established, and this was maintained until 1938-39. Thereafter State and Commonwealth wages for Adelaide were very close until they were made formally identical from February, 1950. This identity has been maintained to date.

The maximum divergence between the Commonwealth "formula" and actual wage was 5% in 1955-56 and 1956-57, but in August, 1959, the two were almost the same.

Perth. The Perth Commonwealth wage fluctuated around 10% below the Melbourne wage until 1927-28, and then rose to about 4% below, where it stayed until 1933-34. The change to the "C" Series lifted it to 3% to 5% above Melbourne for the next three years. There was a sharp drop to 2% below in 1937-38 (partly because of the 1937 judgment differential), and a further decline to 6% below in 1942-43, followed by a steady rise to equality with Melbourne in 1952-53. This relationship was stabilized by the abolition of quarterly adjustments.

The State wage (first fixed in 1926) was roughly half-way between the Perth Commonwealth wage and the Melbourne wage for the first four years. It then rose rapidly to 18% above the Perth Commonwealth wage and 15½% above the Melbourne wage in 1931-32. The State wage fell to only 4½% above the Perth Commonwealth wage in 1934-35, but the differential increased to 6% to 7% from 1938-39 to 1945-46, and about 5% from 1946-47 to 1954-55. It then jumped to 7%, but has since fallen away to only 1%.

Relative to the Melbourne wage, the State wage was 7% to 10% above from 1933-34 to 1936-37, and then 1% to 2% above until 1948-49. Since then it has been about 4% above with the exception of 1955-56 and 1956-57 (7½%) and the latest figure for August, 1959

(1½%). The "formula" Commonwealth wage for Perth rose sharply in 1954 with the abolition of rent control (some 12% relative to Melbourne), and the State wage relationship since that time has been fairly stable at some 5% below the "formula" Perth Commonwealth wage, rather than the 4% above the actual Commonwealth wage of the previous five years.

Hobart. There was no State wage as such for Hobart until the abolition of automatic adjustments. The relationship of the Commonwealth wage to Melbourne was 1% to 2% above in 1923-24 to 1924-25, falling to 4½% below in 1927-28 and then rising again to 4% above in 1932-33. This relationship was more or less retained until 1935-36, but the relative wage then fell again to 4% below by the beginning of the war. After the war it rose gradually to equality with Melbourne in 1951-52 before going to 3% above, at which level it was stabilized by the abolition of quarterly adjustments.

The State wage was lifted by 7% in February, 1956, from the actual Commonwealth wage to the equivalent of the "formula" wage. Quarterly adjustments were then made for the next two quarters before the State wage was again pegged. The excess of 7% above the Commonwealth wage has now been eliminated.

An appraisal of the relative wages fixed by the Commonwealth Court falls into two periods—the period up to 1952-53 when the Court attempted to equate the purchasing power of the wage in each of the six capitals, and the period since then when the Court has preserved the money relativities established by the "C" Series price index for the June quarter, 1953.

For the portion of the earlier period up to the adoption of the "C" Series from May, 1934, the wages actually awarded may be tested for purchasing power by the "C" Series. The figures given earlier in this section show variations from equality of purchasing power as follows:

Sydney Base

Melbourne: from +2·3% to −3·7%. Range 6·0%.
Brisbane: to −6·2%. Range 6·2%.

Melbourne Base

Adelaide: to −7·3%. Range 7·3%.
Perth: to −8·6%. Range 8·6%.
Hobart: from +1·0% to −4·0%. Range 5·0%.

Thus, the issue of which index number to use accounts for discrepancies in equality of purchasing power of from 5% to 8½%.

At the present time Sydney is 2·2% above the "C" Series equivalent, and Perth 4·5% below.

Relative fluctuations in the money wage were somewhat greater. If we take the relationships of the virtually stable ten-year period 1938-48 as a "standard", money relativities with Sydney as a base were as follows:

Sydney	1000
Melbourne	986
Brisbane	938
Adelaide	944
Perth	942
Hobart	950

Thus Melbourne was about 1½% below Sydney and the other four capitals all 5% to 6% below Sydney.

If we examine movements over the whole period in relation to this standard, Melbourne ranged from 2½% higher in 1923-24 to 7½% lower in 1931-32, and back again to 2½% lower in 1952-53. It is now stabilized at 1½% lower than the standard, *i.e.* 3% below Sydney. Brisbane ranged from 4% lower in 1926-27 to 14% lower in 1930-31 and back again to 4½% lower in 1953-54. It is now at 3% lower or 9% below Sydney. Adelaide went from 4% above in 1924-25 to 3½% below in 1932-33 and up to 5% above in 1936-37. It rose again to 3½% above in 1952-53, and is now pegged at 3% above or 1½% below Melbourne. Movements in Perth were from 7½% below in 1923-24 to 10% above in 1934-35; then back again to 5% above in 1953-54, at which level it is stabilized. This is ½% above Melbourne. Hobart was 5½% above standard in 1924-25, 1% below in 1927-28, and 8½% above in 1936-37. It returned to 7% above in 1953-54, and is now stabilized at 6½% above or nearly 3% above Melbourne.

It is thus apparent that the principles followed by the Commonwealth Court have had the effect of causing marked fluctuations in relative wages as between the six capitals irrespective of whether the relativities be measured in money or "real" terms. The attempt to fix relativities in "real" terms also meant that the Queensland and Western Australian Courts were able to fix substantially higher real wages than the Commonwealth wage without granting a money wage which could result in industry being attracted to Sydney or Melbourne because of lower money wage costs.

We have little information on the relative importance of State and Commonwealth awards in each State, but Quarterly Business Surveys made by the Commonwealth Statistician for March, 1948, and April, 1954, showed that, of male employees covered by awards, the percentage under State awards was:

	March, 1948	April, 1954
New South Wales	54 ..	51
Victoria	41 ..	32
Queensland	84 ..	79
South Australia	44 ..	34
Western Australia	90 ..	86
Tasmania	43 ..	38

The 1948 Survey covered only private employees and had a smaller coverage of these than the 1954 Survey. It follows that the

drop in the percentage under State awards does not necessarily indicate any shift to the Commonwealth jurisdiction.

III. *Conclusions*

Various factors which might justify inter-capital city differences from a uniform money basic wage might be suggested. Some of the more obvious are:

(i) Differences in retail prices, *i.e.* differences in the cost of a fixed regimen of commodities.

(ii) Differences in the cost of living, *i.e.* differences in retail prices after allowing for differences in needs (*e.g.* firewood) because of climatic and other factors.

(iii) Differences in prosperity and economic activity and the possibility of providing a stimulus in the more depressed city by lower money wages.

For certain industries the Commonwealth Court has provided a uniform money wage by fixing the basic wage on the six capitals index figure. But for the majority of industries it has based variations on retail price differences only. The third factor of differences in prosperity was applied from 1937 to 1950 in the 2/- lower loading for the three smaller States. No change was made in the differential despite the probability of marked shifts in relative prosperity over the period.

The only full enquiry into the basic wage by other than the Court was the 1920 Royal Commission on the Basic Wage (Piddington Commission). This Commission based its findings entirely on differences in retail prices of a fixed regimen. It specifically found that overall clothing requirements in Brisbane were no different from other parts of Australia although individual items were different. Accordingly it used the same regimen for clothing. But the Commission made no reference on the subject of fuel to different requirements and again fixed the same quantity, though this must be wrong in comparing, say, Brisbane and Hobart.

The "C" Series index of retail prices was based substantially on the Piddington list of commodities for clothing and miscellaneous items. These two groups were combined with the existing food and rent groups of the "A" Series. There are, however, marked differences in capital city relativities between the Piddington Commission findings and the "C" Series for the same period, *i.e.* November, 1920. These occur mainly in miscellaneous and rent.

For rent the Piddington Commission used a standard five-room house, while the "C" Series used the "all house" component of the "A" Series. This was later changed to four- and five-roomed houses. Relativities for the six capitals on the Commission and various index bases are as follows for November, 1920:

	Piddington Commission	"C" Series (all houses)	"C" Series (4 & 5 rooms)	"A" Series
Sydney = 1000				
Melbourne	995	1014	988	999
Brisbane	907	899	884	864
Melbourne = 1000				
Adelaide	997	973	992	960
Perth	978	911	948	855
Hobart	1004	1012	1035	1030

The Court in fact continued to use the "A" Series as its criterion of retail price differences until 1933. If, as seems proper, we regard the Commission finding as the most careful examination, these figures show that the "C" Series lay between the Commission and the "A" Series, and that the "A" Series was markedly in error by either test except for Melbourne. The relative wage actually fixed by the Court was about 4% below the Piddington amount for Brisbane and Adelaide, and 12½% below for Perth. For Hobart it was nearly 3% higher. In money terms, Brisbane and Perth were both about 14% below Sydney and Melbourne, and hence it is not surprising that the Commonwealth wage is only operative to a minor degree in those two States.

The discrepancy between the "A" and "C" Series as a measure of relative retail prices remained high throughout the 'twenties. For the average of the last four years it was 2% for Brisbane, 4% for Hobart, 5% for Adelaide, and 7½% for Perth. There were further rapid changes in the depression, and by the December quarter, 1932, when the "A" Series was abandoned, the "A" Series, as compared with the "C" Series, had moved 4% higher in Sydney as compared with Melbourne and Brisbane, and had fallen 2% in Adelaide as compared with Melbourne, but had risen 5% in Hobart as compared with Melbourne.

One can only conclude that the retention of the "A" Series until 1932 was governed more by conservatism than by any real concern with preserving a constant ratio between the basic wage and retail prices. There is, in fact, no indication that the Court examined the relevancy of the "A" Series at all seriously, and it took in its stride such obvious discontinuities as a 17% rise in rent in Brisbane between the December quarter, 1925, and the March quarter, 1926. It may be added that the Commonwealth Statistician also gave no explanation of this and similar discontinuities for other towns in both the "A" and the "C" Series between the same two quarters. Nor did the Court take any action when a sudden rise in the price of potatoes raised the Sydney basic wage by 4·9% in 1929. This increase, amounting to 4/4½ a week, would, in itself, have been enough to buy three times the average weekly consumption of potatoes even at the new peak price.

With the adoption of the "C" Series, extravagances of this sort were, at least, substantially modified, but the rent component from the point of view of inter-city differences, remains most unsatisfactory.

In 1936 rent-relativities were adjusted to conform with the actual rents of four- and five-roomed houses as shown by the 1933 Census. Thus all pretence of measuring a constant quality of house was abandoned except in so far as the measurement related to four- and five-roomed houses in fixed proportions. But most houses in Brisbane are timber as against brick and stone in southern States. On the other hand, the average house in Brisbane has more rooms which may merely be a compensation for the lighter timber construction. In any case, there would appear to be no *a priori* reason for restricting rent measurement to the actual average for four and five rooms rather than using the average for all houses.

These problems of measuring a uniform quality of house may, however, be relatively minor compared with the difficulty of measuring movements in rent over time for any one city. The present rent component of the "C" Series is the 1933 Census figure adjusted for subsequent rent changes, and showed, for example, that rents in Brisbane were 25% lower than in Sydney in June, 1954. But the 1954 Census showed rents of both four-roomed and five-roomed houses in Brisbane as 10% higher than Sydney.

By 1954, however, the Commonwealth Court had abandoned the "C" Series as a basis for determining movements in the basic wage and for fixing relativities between cities, except that the relativities of the June quarter, 1953, have in fact been substantially preserved by the practice of adding uniform amounts for all capitals. The result is that the relativities of six years ago have remained a constant feature irrespective of subsequent changes in relative retail prices. As indicated in the previous section, Sydney is now 2·2% above its "C" Series equivalent, while Perth is 4·5% below.

Changes in the "C" Series equivalent between the June quarter 1953 and the June quarter 1959 are reflections of changes in the groups of the index and, in this sense, may be said to be accounted for as follows:

	Food	Clothing	Miscellaneous	Total ex Rent	Rent	Total
	s.	s.	s.	s.	s.	s.
Sydney	16·1	3·7	7·9	27·7	6·2	33·9
Melbourne	18·5	5·5	9·5	33·5	8·2	41·7
Brisbane	20·2	5·7	8·9	34·8	10·2	45·0
Adelaide	21·3	1·6	5·0	27·9	12·0	39·9
Perth	18·0	5·0	5·8	28·8	24·1	52·9
Hobart	13·2	6·1	6·5	25·8	19·1	44·9

The actual basic wage has been increased by 40/- for all six capitals.

There would appear to be little case for sticking to these six-year-old relativities, particularly since prices were still showing marked fluctuation in 1953. For example, if September instead of June had happened to be the base, Hobart, relative to Melbourne, would now be some 8/- higher.

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BUSINESS ENTERPRISE ACCOUNTS IN RELATION TO DIFFERENT KINDS OF SOCIAL ACCOUNTING SYSTEMS

I. *The Integration of Social Accounting Systems*

Recent studies have reviewed the development of new types of social accounting systems and have discussed their relationship to the national income and product accounts on which the attention of economists has so far been predominantly focussed.[1] In addition to the national income and product accounts themselves four social accounting systems have been distinguished, known respectively as flow-of-funds accounting, balance-of-payments accounting, input-output analysis, and national balance sheets. Since balance-of-payments accounting is virtually an extension of national income accounting, it hardly seems necessary to regard it as a separate accounting system; but the other three systems all have distinguishing characteristics which warrant specialized treatment and which have so far resulted in analyses that are largely independent of the national income accounting system.

It is nevertheless necessary, if statistical economy is to be achieved and confusion in use and interpretation avoided, that the different forms of national economic accounts be integrated as far as possible into a single social accounting system.[2] It has been shown that such integration is possible at the aggregative level,[3] with the national income and product accounts serving as the framework of the integrated system. It is not sufficient, however, to show schematically how such integration may be achieved; it is also necessary that the data presented in the different systems be derived as far as possible from the same basic sources. At the present time the infor-

1. See National Bureau of Economic Research, National Accounts Review Committee, *The National Economic Accounts of the United States,* Extract from Hearings before the Joint Economic Committee, Congress of the U.S. (Government Printing Office, Washington, 1958); J. P. Powelson, *Economic Accounting* (McGraw-Hill, New York, 1955); S. Sigel, "A Comparison of the Structures of Three Social Accounting Systems", in *Input-Output Analysis: An Appraisal,* National Bureau of Economic Research Studies in Income and Wealth, Vol. 18 (Princeton University Press, 1955); Richard and Nancy D. Ruggles, *National Income Accounts and Analysis* (McGraw-Hill, New York, 1956); M. Copeland, "The Feasibility of a Standard Comprehensive System of Social Accounts", in *Problems in the International Comparison of Economic Accounts,* National Bureau of Economic Research Studies in Income and Wealth, Vol. 20 (Princeton University Press, 1957); National Bureau of Economic Research, *A Critique of the United States Income and Product Accounts,* Studies in Income and Wealth, Vol. 22 (Princeton University Press, 1958); National Income Committee of the American Accounting Association, *A Survey of Economic Accounting* (American Accounting Association, 1958). The author is particularly indebted to Professor Powelson's book for some of the ideas developed in this paper.

2. See *The National Economic Accounts of the United States,* p. 40.

3. *Ibid.,* chapter V.

mation which forms the basis of the various social accounting systems is derived from a multitude of often quite unrelated sources, so that the resulting estimates contain statistical errors and lack mutual consistency. If a fully integrated structure of accounts is to be constructed differences between the various systems ought to be confined to differences in concept, classification and coverage (reflecting their respective purposes) and should not contain discrepancies arising out of differences in statistical source material. The same basic data, that is to say, should be used in all the constituent systems of social accounts which go to make up the integrated whole.

In so far as business enterprises are concerned, this means making use of the accounting reports which the enterprises prepare for their own internal purposes, and it is the aim of this paper to show how the information contained in these reports may be adapted to conform to the requirements of the various social accounting systems which have been distinguished. The paper will be concerned essentially with problems of classification, valuation problems being discussed only incidentally. The business accounts used for purposes of illustration are those of a trading (*i.e.*, a non-manufacturing) enterprise, and it is assumed that the values recorded in the business accounts may be transposed directly, by ordinary aggregation or consolidation processes, into the various social accounting systems. In so far as manufacturing businesses and changing price levels cause special problems these are treated separately.

II. *The Accounting Reports of Business Enterprises*

In Table I the accounting reports of a hypothetical trading company are reproduced more or less in the form in which they are normally prepared for presentation to the shareholders and management of the enterprise (but with the detailed accounting classification omitted). It will be observed that a complete set of accounting reports contains four statements, *viz.*, a profit and loss statement; an appropriation statement (which may, however, be combined with the profit and loss statement to form one statement); a balance sheet; and a statement of sources and uses of funds (usually known as a funds statement). These show respectively the revenue and cost flows during the period and the derivation of profit; the distribution of profit; the nature of the funds employed by the company (shareholders' funds and liabilities) and its assets, as at the end of the period; and the changes in funds and assets during the period. For purposes of the analysis carried out in this paper, Table I also includes the balance sheet of the company at the beginning of the period (it is, in any case, the usual practice for companies to include comparative figures for previous years in all their statements).

Given the information contained in sections (a), (b) and (c) of Table I, section (d), the funds statement, may be substantially

TABLE I

Accounting Reports of a Business Enterprise

(a) PROFIT AND LOSS STATEMENT FOR YEAR

Sales (1)		£20,000
Less: *Cost of Goods Sold* (2)		
Opening Stock (3)	£5,000	
Purchases (4)	12,000	
	17,000	
Less: Closing Stock (5)	6,000	
		11,000
Gross Profit (6)		9,000
Less: *Expenses* (7)		
Advertising (8)	800	
Wages and Salaries (9)	2,000	
Payroll Taxes (10)	500	
Depreciation on Fixed Assets (11)	1,200	
Interest on Debentures (12)	500	
		5,000
Net Profit (13)		£4,000

(b) APPROPRIATION STATEMENT FOR YEAR

Balance at beginning (14)		£1,000
Net profit (13)		4,000
		5,000
Less: Direct Company Taxes (15)	£1,000	
Dividends (16)	2,000	
		3,000
Balance at end (17)		£2,000

(c) BALANCE SHEET

	At Beginning of Year		At End of Year	
Assets			*Assets*	
Cash (18)	£500		Cash (27)	£1,000
Trade Debtors (19)	2,500		Trade Debtors (28)	4,000
Stocks (3)	5,000		Stocks (5)	6,000
Fixed Assets (at cost) (20)	£10,000		Fixed Assets (at cost) (29)	£11,000
Less: Depreciation Provision (21)	2,000		*Less*: Depreciation Provision (30)	3,200
	8,000			7,800
	£16,000			£18,800
Funds Employed			*Funds Employed*	
Trade Creditors (22)	£4,000		Trade Creditors (31)	£4,800
Debentures (23)	5,000		Debentures (32)	5,000
Shareholders' Funds (24)			*Shareholders' Funds* (33)	
Contributed (25)	£6,000		Contributed (34)	£7,000
Accumulated (26)	1,000		Accumulated (35)	2,000
	7,000			9,000
	£16,000			£18,800

(d) FUNDS STATEMENT FOR YEAR

Sources		*Uses*	
Profit (13)	£4,000	Direct Taxes (15)	£1,000
Depreciation Allowances (11)	1,200	Dividends (16)	2,000
New Capital raised (34—25) ..	1,000	Purchase of Fixed Assets (29—20)	1,000
		Increased Working Capital [(27+28+5—31)— (18+19+3—22)]	2,200
	£6,200		£6,200

derived.[4] This is of some importance, since it has not yet become standard practice for all companies to present funds statements as part of their annual reports. The number which appears in brackets after each item in Table I is included in order to assist the reader with the subsequent analysis carried out in this paper.

III. *National Income and Product Accounts*

The next task is to show how the information contained in Table I may be reclassified to meet the requirements of the various social accounting systems. This demands a brief discussion of the nature, purpose and scope of each system. The national income and product accounts show how the nation's output is produced and distributed, and are designed in particular to emphasize economic relationships of significance in connection with problems of maintaining economic stability and growth (although they also provide information that is relevant in the tasks of securing an efficient use of the nation's resources and an equitable distribution of the national income). For purposes of national income accounting the economy is divided into a number of sectors or economic groups (*e.g.* business enterprises, governments, households), and the accounts show, in respect of each group:

(a) how income is created (the production account);
(b) how income is disposed of, that is, how it is allocated among consumption and saving (the appropriation account); and
(c) how investment expenditure is financed (the savings-investment or capital account).

The national income accounts are thus concerned primarily with the recording of flows of goods and services, and throw little light on financial relationships either within or between groups. This follows, indeed, from the nature of the double-entry system which is used in national income accounting. A transaction between, say, a business and its customer is recorded in the national income accounts not from the point of view of the business or the customer, but from that of the economy at large. Only one aspect of the transaction as it affects each party, *e.g.* the sale and purchase of goods, is recorded;

4. The main gap is in respect of purchases and sales of fixed assets, only the net change in which can be calculated from balance sheet figures.

the change in the cash position (or state of indebtedness) of the two parties is ignored. A financial transaction is recorded in the national income accounts only when both aspects of the transaction are financial (*e.g.* when one party makes a cash loan to the other). In effect, the double entry of the national income accounts is obtained by combining the debit entry in one transactor's accounts with the credit entry in the books of the other transactor.

Table II indicates how the relevant national income and product accounts may be derived from the information contained in Table I. The first account, the Production Account, will be consolidated with the corresponding accounts of other enterprises to show how the business sector derives its income and contributes to the national product. It is therefore necessary to distinguish between the creation of national product by the business (net output or value added) and the purchase of current goods and services from other businesses (intermediate goods and services which will be eliminated by the consolidation process).[5] For national income accounting purposes it is also necessary to distinguish between payments to factors of production and transfers of income to other sectors. The costs and expenses which appear in the business Profit and Loss Account are thus reclassified, for purposes of the national Production Account, into purchases from other businesses, factor payments, transfer payments and capital consumption (*i.e.* depreciation) allowances. The first of these items, *viz.* purchases from other businesses, is then deducted from the gross output of the business (consisting of sales *plus* increase in stocks) in order to measure the net output of the business, or its contribution to the national product. The only other classification problem affecting the Production Account is the division of transactions by sectors. Most transactions affect one sector only, but some, *e.g.* sales and interest, may affect several sectors. It is unlikely that a breakdown by sectors can be obtained as part of the ordinary business accounting processes, so that the required information will normally have to be derived from statistical sources or by analysing the accounts of other sectors in which, in effect, the other sides of the double entry are recorded.

The second of the national income accounts, the Appropriation Account, is designed to show how the income earned by the business is disposed of. Since a business enterprise cannot itself consume final output, the profit must be either transferred to other sectors, by way of taxes and dividends, or saved in the form of undistributed profits. This account thus contains essentially the same information as the business Appropriation Account. The third account, the Capital Account, records the saving and investment transactions of the business. Although generally similar to the business Funds Statement, certain differences in classification will be noted. In particular the

5. The purchase of capital goods is recorded separately in the Capital Account (see below).

Capital Account emphasizes physical capital formation, *i.e.* investment in stocks and fixed assets, on the one hand, and the savings used to finance that capital formation on the other. Net borrowing from (or lending to) other sectors is in effect a residual item in this account, and for national income accounting purposes the raising of new share capital has much the same significance as other borrowing from the households sector. In the consolidation of business Capital Accounts, changes in inter-business indebtedness will be eliminated, leaving the consolidated business account to record changes in indebtedness between the business sector and the other sectors that are distinguished in the national income accounts. It will again be necessary to analyse the accounts of the other sectors to obtain a complete breakdown of this item. The number in brackets after each item in Table II refers to the source of the entry in Table I.

This section on national income and product accounts would not be complete without some reference to two problems which have been assumed away in the data used for purposes of the illustrative tables. The first relates to the treatment of capital gains and losses. Realized capital gains and losses are usually recorded in the so-called non-operating section of the business profit and loss statement, but since they are excluded from the national income accounts care needs to be taken to see that the figures are adjusted accordingly. No problem arises in connection with unrealized capital gains, which are not recorded in either the business or the social accounts. Adjustments to the business profit and loss statement reflecting a policy of conservatism, *e.g.* provisions for anticipated losses on stocks or book debts, have some of the attributes of capital losses, and should be similarly eliminated from the national income accounts.

The second problem is essentially one of valuation, and results from the business accountant's assumption that changes in the price level may be ignored. Transactions are recorded in the business accounts in terms of actual historical values, so that the prices of different periods are used to value different items appearing in the accounting reports. Two items in particular in the Profit and Loss Statement, *viz.* depreciation and the opening stock element in cost of goods sold, reflect the prices of past periods, with the result that the profit figure does not constitute a measure of surplus in terms of current prices. If the values recorded in business accounts are carried into the national income accounts without adjustment, the latter lack a consistent basis of valuation and their usefulness for economic policy is impaired. In Table II four important items (*viz.* business profits, depreciation allowances, investment in stocks, and undistributed business income) may thus be valued in terms of prices which differ from the current period's prices that are used to value the remaining items in the Table. It has been suggested elsewhere[6] that adjustments

6. R. L. Mathews and J. McB. Grant, *Inflation and Company Finance* (Law Book Co., Sydney, 1958).

TABLE II

The National Income and Product Accounts of a Business Enterprise

(a) PRODUCTION ACCOUNT

Factor Payments:		Sales to Consumers (1)	£20,000
Wages and Salaries (9) ..	£2,000	Increase in Stocks (5—3) ..	1,000
Interest (12)	500		
Profit (13)	4,000	*Gross Output*	21,000
Net Incomes at Factor Cost ..	6,500	*Less: Purchases of Intermediate Goods and Services*:	
Transfers:		Goods (4) £12,000	
Indirect Taxes (10)	500	Advertising (8) .. 800	
			12,800
Net Incomes at Market Prices ..	7,000		
Capital Consumption:			
Depreciation Allowances (11)	1,200		
Gross Incomes at Market Prices	£8,200	*Net Output or Contribution to Gross National Product* ..	£8,200

(b) APPROPRIATION ACCOUNT

Transfers:		Profit (13)	£4,000
Direct Taxes (15)	£1,000		
Dividends (16)	2,000		
	3,000		
Undistributed Income (17—14)	1,000		
Total Appropriations	£4,000	*Income Available for Appropriation*	£4,000

(c) CAPITAL ACCOUNT

Investment in Stocks (5—3)	£1,000	Undistributed Income (17—14)	£1,000
Fixed Capital Investment (29—20)	1,000	Depreciation Allowances (11)	1,200
		Net Borrowing from (+) or Lending to (—) Other Sectors [(34+31—27—28)—(25+22—18—19)]	—200
Capital Formation	£2,000	*Saving*	£2,000

to reflect price level changes should be made as a matter of course in the business accounts, in order to meet the internal needs of management. These adjustments, which should be recorded in a separate section of the Appropriation Account, represent the amounts necessary to bring the historical-cost values of depreciation and opening stocks into line with their current values and permit the measurement in the accounts of a new concept of business surplus, known as "current income". If this procedure is followed the business accounts automatically provide the information that is necessary to record every transaction in the national income and product accounts in terms of current values. If the price-level adjustments are not made explicitly in the business accounts it will be necessary to resort to statistical measures to repair the deficiency.[7]

7. J. McB. Grant and R. L. Mathews, "Depreciation and Stock Appreciation Adjustments in the National Income Accounts", *The Economic Record*, April, 1959.

IV. *Flow-of-funds Accounts*

Unlike the national income accounts, which, as we have seen, are concerned primarily with the recording of flows of goods and services, flow-of-funds accounts record all financial flows, whether or not these flows are associated with movements in goods and services. Flow-of-funds accounts are best regarded, perhaps, as variations of the conventional funds statements which are prepared by business enterprises. The complete system consists of an integrated set of funds statements, one for each sector of the economy, which record not only the movements in assets and financial obligations that are described in conventional business funds statements, but also gross flows of revenue (sources of funds) and costs (uses of funds). The flow-of-funds account for each sector, that is to say, shows: (a) how the sector has obtained its funds (through the earning of revenue or the incurring of financial obligations); and (b) how it has used them (through the incurring of costs or the creation of assets).

The sector classification that is usually adopted in flow-of-funds accounting differs from that used in national income accounting, but this need not concern us in this paper. Transactions within and between sectors are classified in two ways: *first*, according to their significance in relation to revenue-cost flows, *i.e.* flows of goods and services (including costs of acquiring stocks and fixed capital assets); and *second*, according to their significance in relation to purely financial flows, *i.e.* changes in indebtedness reflecting movements in financial assets and obligations. Each flow-of-funds account thus contains a non-financial and a financial section on both the sources and the uses sides. The account for a business enterprise records, in the "non-financial sources" section, the funds derived from the sale of goods and services (including the sale of fixed assets), while the "financial sources" section records funds derived through the incurring of financial obligations, *e.g.* increases in liabilities. The "non-financial uses" section shows the funds absorbed by the purchase of goods and services, *e.g.* wages paid or expenditure incurred on the purchase of fixed assets; while the "financial uses" section records funds applied to the accumulation of financial assets, *e.g.* increases in cash balances. It might be observed at this point that flow-of-funds accounts do not record conventional accounting profits and losses, since these are not significant in relation to movements of funds among sectors. For the same reason the revenue and cost flows which are recorded do not always coincide with conventional accounting revenues and costs. Internal book entries such as depreciation, which do not involve fund flows between the business and other economic units, are excluded from the flow-of-funds accounts. The full cost of acquiring fixed assets is, however, recorded as a non-financial use of funds at the time the transaction takes place. In the same way the proceeds derived from the sale of fixed assets appear as a non-financial source of funds.

It will be seen, therefore, that in flow-of-funds accounting no distinction is made between current and capital transactions. It does not follow, as might appear at first sight, that the flow-of-funds accounts are drawn up on a purely cash basis. Indeed, if this were the case it would be virtually impossible to use the accounting reports of business enterprises, which are traditionally prepared on an accrual basis, as a basic source of data. Whether a transaction is recorded in the flow-of-funds accounts on a cash or an accrual basis depends rather on its effect on inter-sector financial relationships. Business transactions such as the sale of goods are recorded on an accrual basis because the financial position of the business changes as soon as the title to the goods is transferred, whether or not cash is received immediately in payment for the goods. The payment of taxes, on the other hand, is usually recorded in the flow-of-funds accounts on a cash basis, because the government's accounts are compiled on a cash basis and its financial position is only affected when the cash is actually received. This may cause difficulties if the two parties to a transaction do not record it at the same time, *e.g.* if one's accounts are maintained on a cash basis while the other employs an accrual system, but this is a problem that cannot be pursued in this paper.

The distinction between non-financial and financial transactions which has been noted is fundamental to flow-of-funds accounting. Since the analysis is intended to provide a measure of changes in the financial structure of the economy, and of changes in financial relationships among different economic groups, it is particularly significant as a guide to monetary policy. Because of its emphasis on the interdependence of financial and non-financial flows, however, the information provided by flow-of-funds accounting is also relevant in the formulation of fiscal policy.

The interdependence of non-financial and financial flows which has been observed reflects the dual nature of economic transactions that underlies the double-entry system of book-keeping. In the books of a business enterprise each transaction is recorded twice. The sale of goods for cash, for example, is recorded in the books of the seller by means of a credit entry in the Sales Account and a debit entry in Cash Account. The former entry is a non-financial aspect of the transaction, reflecting the flow of goods out of the business, and the latter is a financial aspect of the transaction because it records the flow of money into the business. But just as the transaction is recorded twice in the books of the seller, so it is recorded twice in the books of the buyer—once to describe the non-financial flow (the debit entry in Purchases Account reflecting the movement of goods), and once to describe the financial flow (the credit entry in Cash Account reflecting the financial aspect of the transaction).

We have seen that in national income accounting the financial flows are usually ignored, so that the double entry is obtained by

combining the credit entry (Sales) in the books of the seller with the debit entry (Purchases) in the books of the buyer. In an integrated flow-of-funds system, on the other hand, the transaction is recorded four times, reflecting the debit and credit entries (*i.e.* the non-financial and the financial flows) in the books of both the seller and buyer. This is essentially the technique which is employed in flow-of-funds accounting. If we assume that there are two sectors, Business Enterprises and Households, the sale of goods for cash (value, say, £10) is recorded in the following way:

	Business Enterprises		Households	
	Dr.	Cr.	Dr.	Cr.
Non-financial flow				
Sale and purchase of goods		£10	£10	
Financial flow				
Change in cash balances	£10			£10

In place of the abbreviations "Dr." and "Cr." we may substitute the headings "Uses of Funds" and "Sources of Funds" respectively, and we have then in effect constructed two flow-of-funds accounts, or integrated funds statements. It will be observed that the four entries result not only in lateral balance (with debit entries equal to credit entries in each half of the transaction) but also in vertical balance (with debits equal to credits in the account of each sector).

Not all transactions involve the transfer of goods and services. The repayment of a debt, for example, needs to be recorded as four financial entries, two reflecting the change in cash balances and two the change in indebtedness. Barter transactions, which do not involve any financial flows at all, are not recorded in the flow-of-funds accounts. The only transactions which are recorded are those which (a) involve two economic units and (b) involve transfers of money or credit.

It is now possible to indicate how the information contained in Table I may be reclassified to conform to the requirements of flow-of-funds analysis. It will be seen from Table III that the business flow-of-funds account combines information contained in the Profit and Loss Statement, the Appropriation Statement and the Funds Statement of Table I. However, purely internal transactions such as depreciation are omitted; there is no reference to the profit figure which assumes such importance in the business accounts; and both sides of the account reflect the fundamental division of transactions into non-financial and financial.

In classifying transactions for flow-of-funds purposes it is possible to avoid one difficulty which is experienced in national income accounting. We have seen that, in the latter system, it is necessary to distinguish between intra-sector and inter-sector transactions, the

TABLE III

The Flow-of-funds Account of a Business Enterprise

(a) SOURCES OF FUNDS		
(i) *Non-financial*		
Sales Revenue (1)		£20,000
(ii) *Financial*		
New Capital Issues (34-25)	£1,000	
Increase in Trade Liabilities (31-22)	800	
		1,800
Total		£21,800
(b) USES OF FUNDS		
(i) *Non-financial*		
Wages and Salaries (9)		£2,000
Interest (12)		500
Indirect Taxes (10)		500
Other Goods and Services—		
Purchases in Cost of Goods Sold [4—(5—3)]		11,000
Advertising (8)		800
Increase in Stocks (5—3)		1,000
Capital Expenditure (29—20)		1,000
Direct Taxes (15)		1,000
Dividends (16)		2,000
		£19,800
(ii) *Financial*		
Increase in Cash (27—18)	£500	
Increase in Trade Debtors (28—19)	1,500	
		2,000
Total		£21,800

former being eliminated by consolidation of the individual accounts which make up the group. In flow-of-funds accounting, on the other hand, not all the sector accounts are consolidated. The individual accounts of the business sector, for example, are merely combined or aggregated, so that the resulting figures include transactions between businesses as well as transactions with other sectors. The number in brackets after each item in Table III again refers to the relevant transaction in Table I.

A valuation problem arises in connection with flow-of-funds accounting whenever the business accounts reflect allocated costs that do not correspond exactly with financial flows. The need to exclude depreciation from the flow-of-funds accounts has already been observed. The accounts of manufacturing enterprises, however, are conventionally drawn up in such a way that it is difficult to segregate costs involving money flows from costs incorporating allocated overheads (including depreciation). The cost of manufactured products, which subsequently enters cost of goods sold, is usually measured by adding to direct material and wage costs an arbitrary share of factory overheads. The value of unsold stocks, both finished goods and work-in-progress, likewise reflects the arbitrary allocation of overheads,

and in the more sophisticated standard cost accounting systems even the absorption of direct material and direct labour costs does not necessarily coincide with money outlays. In these circumstances the information needed for flow-of-funds accounting can only be obtained by going behind the accounting reports and ascertaining, from the original double-entry records, the nature of the costs actually incurred. It might be observed that so-called direct costing systems, which segregate fixed and variable costs and make no attempt to allocate the former, automatically result in the kind of classification that is relevant to flow-of-funds analysis.

V. *Input-Output Tables*

Because they are concerned with transactions in goods and services, and ignore changes in financial relationships, input-output tables resemble national income and product accounts rather than flow-of-funds accounts. Indeed, it is possible to construct input-output tables which, although different in form, present exactly the same information as the national income accounts. The formal difference between the two systems stems from the fact that national income analysis is carried out within a double-entry accounting framework, while input-out analysis depends on the construction of a table, or matrix, which contains a separate row and column for each sector. The goods and services acquired by each sector from each other sector (the inputs) are recorded in the columns, while the output disposed of by each sector to each other sector is recorded in the rows. The input of one sector, it will be observed, is the output of another. In place of the double entry of the national income accounts (a debit entry for inputs and a credit entry for outputs) and the quadruple entry of the flow-of-funds accounts, there is thus only one entry for each transaction in the input-output table, which simultaneously records the input of one sector and the output of another.

In addition to formal differences in the manner of presentation, however, input-output tables differ from national income accounts in the classification of sectors and transactions. The main purpose of input-output analysis is to derive information about inter-industry technological relationships. To this end the business sector is divided into industries. Transactions within[8] and between the different industries are recorded in the input-output table, as well as transactions between industries and the other "autonomous" sectors of the economy which are assumed to provide the final demand for the output of the industries. The autonomous sectors include not only consuming sectors, such as households and governments, but also "stocks" and "fixed assets" which are assumed temporarily to store industrial output.

8. There is no elimination of intra-industry transactions; the transactions of firms within each industry are combined (and not consolidated, as in national income accounting).

Table IV illustrates the construction of an input-output table on the basis of the information presented in Table I. The table is necessarily incomplete because the ordinary business accounts do not provide all the information necessary for an industrial breakdown of transactions. In practice the accounting reports of business enterprises thus need to be supplemented by an analysis of purchases and sales by industries. Where one enterprise operates in a number of industries, moreover, separate figures are required for the plants in each industry, *i.e.* the accounting information needs to be presented on a plant and not on an enterprise basis. In Table IV it is assumed that there are only two industries, represented by "This Business" and "Other Businesses". Because information about "Other Businesses" is not given, the input of "Other Businesses" is assumed to represent the running down of stocks to the value of £13,000 (as a result of their sales of £12,000 worth of trading goods and £1,000 worth of fixed assets to "This Business") and wages and profits distributed to households by advertising firms, £800.

It will be observed that the sum of the inputs of each industry ("This Business" and "Other Businesses") equals the sum of its outputs. This is a matter of definition, since the undistributed profits of each industry, which would otherwise constitute a surplus, are treated as though they are distributed to households (by being recorded as inputs from households). The outputs of each autonomous sector do not necessarily equal its inputs, any difference representing saving (or dissaving) by the sector; but the aggregate outputs and inputs of the autonomous sectors are equal, *i.e.* aggregate saving is equal to aggregate investment. The cross reference to the corresponding item in Table I is recorded after each figure in the body of Table IV.

TABLE IV

Input-Output Table of a Business Enterprise

Inputs ↓ / Outputs →	This Business	Other Businesses	Stocks	Fixed Capital	Government	Households	Total Outputs
This Business ..	—	—	£1,000 (5–3)	—	—	£20,000 (1)	£21,000
Other Businesses	£12,800 (4+8)	—	—	£1,000 (29−20)	—	—	£13,800
Stocks	—	£13,000 [4+(29−20)]	—	—	—	—	£13,000
Fixed Capital ..	£1,200 (11)	—	—	—	—	—	£1,200
Government ..	£1,500 (10+15)	—	—	—	—	—	£1,500
Households ..	£5,500 [9+12+16+ (17−14)]	£800 (8)	—	—	—	—	£6,300
Total Inputs ..	£21,000	£13,800	£1,000	£1,000	—	£20,000	£56,800

VI. *National Balance Sheets*

The final national accounting statement which can be constructed from consolidated business accounts is the national balance sheet, with which is associated the national wealth statement. The national balance sheet, which is an aggregation (*i.e.* a combination) of the assets and funds employed by the various sectors at a particular point of time, throws light on significant financial relationships among the sectors and also provides information about the relative importance of physical assets (fixed assets and stocks) and different classes of financial claims. The national wealth statement is constructed by consolidating the domestic sector balance sheets, so that the financial claims between domestic sectors of the economy are eliminated, and combining the result with the balance sheet of the foreign sector in such a way as to record three major components of national wealth, *viz.* net foreign claims, fixed assets and stocks. (In calculating net foreign claims allowance needs to be made, of course, for the foreign ownership of domestic physical assets.)

Few conceptual or classification problems need arise when business balance sheets are used to provide information for the national balance sheet, since the major classes and divisions of the two statements are essentially similar. But whereas assets are usually classified on a current-fixed (*i.e.* a liquidity) basis for business accounting purposes, the basic division in social accounting is between physical assets (*i.e.* fixed assets and stocks) and financial claims. A secondary basis of classification in the national balance sheet of each sector, which affects both the assets and the funds side of the statement, involves the breakdown of financial claims (including shareholders' funds) by sectors. It is particularly necessary that the sector balance sheets distinguish between domestic and foreign claims. Intra-sector financial claims are eliminated by the consolidation process that is necessary to construct sector balance sheets, and the inter-sector claims of the domestic sectors are in turn eliminated when the sector balance sheets are consolidated to form the national wealth statement. But, as we have seen, all inter-sector claims remain in the national balance sheet.

The classification of assets into physical assets and financial claims is simply a matter of re-arranging groups which are distinguished as a matter of course in business balance sheets. Fixed assets should, however, be subdivided into land, buildings and equipment. The breakdown of financial assets and funds by sectors is more difficult, since business accounts do not normally provide this information. Nevertheless many items, such as bank balances and amounts invested in government securities, may clearly be assigned to a single sector, while the consolidation processes will themselves help to establish figures for net inter-sector indebtedness and provide a check on statistical data used to supplement the information obtained from

accounting reports. It should be noted that where paid-up equity capital is in the hands of foreign shareholders, a pro-rated portion of accumulated capital must be allocated to the foreign sector. Table V reclassifies the information contained in the Table I end-of-year balance sheet in the form that is appropriate to the national balance sheet of the business sector. It is assumed for purposes of Table V that the financial claims, on both the assets and funds sides, are wholly domestic. The figures in brackets again provide a cross reference to items in Table I.

The major problem in constructing a national balance sheet is not one of classification, but one of valuation. It has already been observed that certain items in the national income accounts need to be revalued in terms of current prices if the accounts are to have a consistent economic meaning. The problem with respect to the national balance sheet is essentially similar, but in estimating the current value of assets and liabilities it is not always possible to use the recorded values of transactions as a starting point. In practice, several bases of valuation need to be combined in the national balance sheet, *e.g.* unadjusted book value in respect of short-term financial claims, such as book debts and bank loans; estimated market value in respect of financial claims for which an active market exists, such as bonds and shares; and estimated current value (depreciated original cost adjusted for price changes) in respect of physical assets. In estimating market or current values it is obviously necessary to rely on statistical rather than accounting data, and to this extent the balance sheets of business enterprises are inadequate for social accounting purposes.[9]

TABLE V

The National Balance Sheet Statement of a Business Enterprise

FUNDS EMPLOYED			ASSETS		
Financial Claims			*Physical Assets*		
Domestic:			Fixed Assets (29—30)	£7,800	
Trade Creditors (31)		£4,800	Stocks (5)	6,000	
Debentures (32)		5,000			£13,800
Shareholders' Funds:			*Financial Claims*		
Contributed (34)	£7,000		*Domestic*:		
Accumulated (35)	2,000		Cash (27)	£1,000	
		9,000	Debtors (28)	4,000	
		18,800		£5,000	
Foreign (-)		-	*Foreign* (-)	-	5,000
		£18,800			£18,800

VII. *Conclusion*

Although there are certain difficulties associated with sector classification and valuation, it is clear that the ordinary accounting

9. For a fuller discussion of this problem see *The National Economic Accounts of the United States*, pp. 151-2.

reports of business enterprises provide most of the information required to build up a record of business transactions in the various social accounting systems. If these systems are to be integrated within a single framework of national economic accounts—or even if no integration is attempted—there are obvious advantages in having a common source of data which extends right back to the original accounting records. Given a consistent and sufficiently detailed classification framework in the business accounts, the social accounting problem resolves itself into the tasks of: (a) collecting the accounting reports of individual businesses (*e.g.* by enlarging the scope of income tax returns); and (b) classifying and tabulating them in accordance with the needs of each social accounting system. Despite the formidable amount of cross-classification that is obviously required, the availability of electronic accounting equipment means that the tabulation process can easily be reduced to a rapidly-performed, routine operation.

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PRICES, PRODUCTIVITY, WAGES AND INFLATION*

Movements in prices, productivity and wages, and their relationship to the problem of inflation, provide one of the most important, topical and controversial of current economic problems. I shall start with some problems of measurement.

Price Indexes

The prices of all commodities change, but the changes in individual commodities take place at different rates and at different times. We all know how some particular prices have moved. None of us knows how every price has moved. Even if we did know, we should have a mass of information so atomised as to be useless. We need some sort of summary figure which will tell us how prices have moved on the average, and this we seek by means of a price index.

The method of constructing a price index is simple. We choose a basket of commodities typical of the whole field of commodities in which we are interested, and price it at two different dates. The ratio of the two aggregate costs gives us the index, which is an indicator of the way prices have moved, on the average, between two different points.

The "C" Series Index of Retail Prices, for instance, is based on a regimen covering a wide variety of consumption goods. Some of the items included, and their percentage contribution to the aggregate cost in 1952, are:

	%	
Food		
Bread and flour	4·8	
Sugar	2·6	
Tea	1·1	
Potatoes	1·5	
Butter and cheese	4·6	
Eggs	1·0	
Bacon	2·1	
Milk	4·0	
Meat	15·8	
Other food	3·3	
		40·8
Rent		11·3
Clothing		31·1
Miscellaneous (Drapery, Utensils, Fuel, etc.)		16·8
Total "C" Series regimen		100·0

*This paper is based on a lecture given in October, 1959, to the Australian Administrative Staff College. Sir Douglas Copland gave eight lectures on the Australian economy to each Session of the College. He asked the present author to deliver these lectures during his absence abroad in 1959.

The following hypothetical example serves to illustrate the construction of a price index:

Item	Quantities Consumed			Prices (d.)		Cost (1949 weights)	
	Unit	1949	1959	1949	1959	1949	1959
Bread	2 lbs.	3·0	4·0	8	16	24	48
Potatoes	7 lbs.	1·5	·5	21	52	31·5	78
Tea	1 lb.	1·2	·5	33	80	39·6	96
Coffee	1 lb.	·7	1·4	100	160	70	112
Butter	1 lb.	4·6	2·3	26	60	119·6	276
Margarine	1 lb.	2·3	4·6	20	30	46	69
Beef	1 lb.	10·0	6·0	17	46	170	460
Mutton	1 lb.	6·0	10·0	13	25	78	150
Aggregate Cost						578·7	1289
Price Index						100	223

This is a simple enough procedure but, as with most economic problems, simplicity is not necessarily truth. There are many weaknesses in price indexes.

First, in a period of changing, especially rapidly changing, prices it is likely that relative prices will also change. In the artificial example above, comparing 1949 and 1959, potato prices have risen more sharply than bread prices, tea more than coffee, butter more than margarine, and beef more than mutton. Since consumers are always looking for ways of spending their money which will give them greater satisfaction for less cost, and since each of the pairs of commodities quoted are more or less substitutable for each other, it is inevitable that there should be changes in the quantities consumed of each commodity in response to changes in their relative prices. In the example, comparing 1949 and 1959, more is consumed of the article that has risen relatively less, and less of the article that has risen relatively more. If we work out a price index using 1959 weights instead of 1949 weights, we find the ratio of the two aggregate costs is 100 : 198, instead of the 100 : 223 yielded by 1949 weights. In general, we can conclude that, since people will always adjust their consumption so as to get a better bargain—buying less of the dearer things and more of the cheaper things—a base-weighted index will always show a larger price-rise than a current-weighted index. In our example, the price index shows a price-rise of 123 per cent over the decade. The true price-rise revealed by these figures, however, is less than this—somewhere between 98 per cent and 123 per cent.[1]

1. A price index has to be calculated by a fixed basket of commodities. To measure aggregate expenditure on actual consumption at different periods is to measure changes in standards of living, as well as in prices. For a full discussion of this problem see J. M. Keynes, *A Treatise on Money* (Macmillan, London, 1930), chapter 8.

Secondly, much economic progress takes the form of the development of new products and the satisfaction of new tastes. The replacement of buggies by cars presumably means the substitution of one form of transport by a better. Yet since we cannot measure the economic welfare provided by the one against the other, no price index can reflect the relative cheapening of transport that has occurred.[2]

Thirdly, where a basket of commodities has to be used over a number of years for purposes of price comparisons, it must in practice contain a relatively small number of commodities, standardized in quality and easily recognizable. We select the basket, hoping that it will be representative of all commodities available, including the many which change their shape and quality often and substantially, and so disqualify themselves from inclusion in the basket. Yet in fact it is in the staple, highly standardized commodities that few technological improvements are likely to occur, and it is in the excluded commodities that major technological improvements are most likely to occur. The prices measured in a price index exclude, therefore, those of commodities where quality improvements and cheapening of production are most likely to occur.

For all three reasons, then—responses to changes in relative prices, development of new products and new tastes, and the concentration of technological improvement on commodities likely to be excluded from price index regimens—price indexes are not highly reliable, especially over long and disturbed periods, and are in general likely to overstate price rises.

Productivity

With more capital being invested in industry, and with better organization and management, labour can be used more effectively and production per man-hour is likely to rise. To measure the extent of this increase is, however, difficult. Even if we have full data about the quantity of each commodity produced, and about the prices paid for each as a measure of its economic worth, we still run up against the index number problem mentioned above in connection with prices: changes in the relative quantities produced of each commodity and in their relative prices make it impossible to develop a single accurate measure of production. In addition, we encounter again the problem of new products and new tastes; and the fact that the commodities for which data are most easily available are ones in the production of which productivity improvements are less likely to occur than in those for which data are more difficult to obtain. We may presume therefore that, just as price indexes are likely to overstate price rises, indexes of production and of productivity are likely to understate increases of productivity.

2. Roland Wilson, *Facts and Fancies of Productivity* (Economic Society of Australia and New Zealand, 1947), p. 19.

Production data available in Australia are good for rural production where the commodities are few, highly standardized, and easily recognizable, so that there are reliable statistics of quantities produced and of prices. The Commonwealth Statistician's index of the quantum of agricultural production is a reliable measure.

For manufacturing production, the problem is more difficult because of the great variety and rapidly changing nature of goods produced. The A.N.Z. Bank Index of Manufacturing Production puts together what information is available but covers only about 38 per cent of total manufactures.

Tertiary production—trade and commerce, finance, construction, services, transport, power and so on—covers some half of total production, but little information is available about production and productivity in these industries.

In his evidence to the Arbitration Commission in 1958, Dr. Salter put together what information was available about increases of productivity in various industries between 1953-54 and 1957-58. The following table shows some of the data he used, and his range of estimated productivity increases, with lower and upper limits and a middle estimate.

Industry	% of Work-Force	Estimated Annual Rate of Increase of Productivity		
		Lower	Middle	Upper
Rural	12·6	2·5	3·0	3·5
Manufacturing	28·2	3·5	4·5	5·5
Retail trade	10·5	1·0	2·0	3·0
Building construction	5·4	0·5	2·0	3·5
Mining	1·6	5·0	5·5	6·0
Government and professional services	12·1	—	0·5	1·0
All Industry	100·0	1·7	2·5	3·3

His middle estimate suggests that, over this period, productivity per man-hour may have increased by about 2½ per cent a year. Allowing for the fact that the terms of international trade have moved against us in recent years, with export prices falling substantially while import prices have risen, the rate of increase in the nation's effective productivity has been somewhat less than this figure.

If we follow Wilson,[3] we may attempt to measure the real volume of home-consumed production by deflating its total value by an index of retail prices. This procedure yields a measure of the purchasing power of this total value of production over the fixed basket of commodities in the regimen of the index.

3. *Op. cit., passim.*

Home-consumed Product at Constant Prices

	1953-54	1958-59
Gross National Product (£m)	4,561	6,197
Less Exports (£m)	828	826
Home-consumed G.N.P. (£m)	3,733	5,371
Index	100	144
Index of retail prices	100	116
Index of non-rural employment	100	109
Index of h.-c. G.N.P. at '53-'54 prices	100	124
—per man employed	100	114

We find here also an increase of productivity of about 2½ per cent a year. The similarity of this result to Dr. Salter's result obtained by quite different methods indicates less the reliability of the simpler method than the fact that, over a period of relative economic stability, widely differing methods are likely to yield rather similar results.

It is interesting to look also at the impact of changing terms of trade. Between 1953-54 and 1958-59 export prices have fallen 28 per cent. The near-stability in the value of exports conceals, in fact, a rise in the physical volume of export production of some 39 per cent.[4] If we are interested in measuring the technical efficiency of such measures as rabbit abatement and pasture improvement, and the impact of drought on physical production, this physical volume of export production is the relevant concept.

However, if we are interested in economic welfare, the relevant concept is rather the purchasing power of the value of our exports over the imported commodities we receive in exchange for our exports. For this purpose, we must deflate the value of our exports by the index of import prices which, between 1953-54 and 1958-59, rose by 9 per cent. We then find that the import value of our exports has actually fallen by 8 per cent. The large difference between these two measures—one of physical quantity, and one of economic usefulness —emphasizes the importance of understanding clearly what it is that we are trying to measure.[5]

We find then that productivity has risen for home-consumed production by about 14 per cent over our five-year period. Productivity in terms of exports sold in exchange for imports has, however, fallen by 8 per cent over the period (rural employment having not changed significantly). If we combine these two measures, giving a weight of 5 to home-consumed production and 1 to exports, we find that effective productivity for all production has risen by about 10 per cent over the period, or by about 1·9 per cent a year.

4. I have deliberately confined these calculations to aggregate figures published in *National Income and Expenditure*. The figure given there for exports, f.o.b., is of course larger than the value of exports covered by the index of export prices.

5. See Wilson, *op. cit.*, on the difference between an egg as a physical object and as a satisfier of economic wants.

Wages

Wage-bargaining and its effects are difficult and controversial issues. The following treatment is, I hope, reasonably simple and clear without being too misleading.

Suppose that, in two successive periods between which there has been no change in real product or real income, you have this position as to money incomes.

	Period 1	Period 2
Wages	60	72
Profits	40	48
	100	120

There has been between the two periods no change in total real income, by definition; and no change in relative incomes which remain at 60 per cent for wages and 40 per cent for profits. The only change that has occurred is a 20 per cent increase in each sector's money income and, inferentially, a 20 per cent increase in costs and prices.

These changes in money incomes, costs and prices may have been caused in several different ways.

First, workers may have demanded wage increases which they intended should be at the expense of profits, but which have, in fact, been matched by increases in profits, as a result of profit-takers keeping their percentage mark-up constant.

Secondly, employers, faced with excess demands in the market for their products, may have bid up wages in an effort to attract scarce labour, knowing they could sell their products at prices high enough to cover higher costs and their own profit margins.

Thirdly, employers, taking advantage of a sellers' market or wanting more profits to finance capital for expansion, or wanting higher profits relative to wages, may have raised prices so as to secure higher profit margins; whereupon workers, embarrassed by higher prices and tempted by higher profits, may have pressed for higher wages.

So a change which achieves nothing but an increase of costs and prices may be set off by (i) pressures from workers; or (ii) the failure of governments to check excess demand; or (iii) pressures from employers.

In fact, over the last ten years all these forces have been operating, and it seems impossible to sort out satisfactorily what has been the responsibility of each. My own opinion is that the failure of governments to check excess demand has been by far the most important cause, and that its effects have been aggravated to a mild degree by employers' efforts to increase their profit margins, and by the efforts of workers and their trade unions, working both directly through wage negotiations with employers and indirectly through the Arbitration Commission, to raise the share going to wages. This,

of course, is not to say that, in another situation, pressures from workers might not become a main source of change.

If this simplified example told the whole story, it might be possible to solve the problem by eliminating excess demand and by trying to persuade employers and workers that the balance of power between them made neither party able to increase its share at the expense of the other. Persuasion might be made more effective by creating an atmosphere of some uncertainty as to whether the monetary authorities would consent to the continued expansion of money supplies required to support the increase of money incomes without unemployment and a reduction of profits. It might be hoped that, eventually, the two parties could carry on with stable money incomes, knowing that both could gain from rising productivity, while neither could gain by a competitive struggle to raise money incomes. In these circumstances, any desired redistribution of incomes could be secured by an expansion of social expenditures financed by progressive taxation.

But the situation in the actual economy is much more complicated than this, even if we abstract from the very great difficulties of eliminating excess demand. In an economy which places a rapid rate of growth high among its economic objectives, the political and administrative difficulties in the way of restraining demand are formidable. However, as excess demand will inevitably bring rising incomes, costs and prices, we shall assume that it has been eliminated —or at any rate so far reduced as to be not seriously troublesome.

There are, however, still good reasons why employers and workers will believe it to be to their advantage to continue the competitive struggle. In the first place, whichever party gets in first with an increase of its income will enjoy a real, though temporary, advantage while the other catches up. Secondly, each party can hope, by attrition, to wear the other down and so gain a long-term advantage with a permanent shift of income distribution in its favour. It would require a great effort of will, and a degree of sophistication and far-sighted wisdom not possessed by the parties concerned, to persuade them to give up these possible sources of gain.

In any case, the economy includes many more than the two homogeneous parties of workers and profit-takers we have so far been considering. Bringing these other parties in gives much more solid ground for employers and workers to believe that a competitive struggle for higher money incomes is in their interest.

Both parties are likely to gain from this struggle at the expense of sectors less able to increase their money incomes—for instance, salary earners, workers enjoying margins, recipients of relatively fixed rent, interest and other incomes, pensioners, exporters selling at world prices, producers competing with imports, and so on.

Further, if export prices rise, then unless the Government appreciates the exchange rate or imposes extra taxes on exporters, the

only way in which other members of the community can share in the higher national prosperity resulting from higher export prices is by raising their money incomes which, by imposing higher costs on exporters, transfers some of the real benefit to them.

If, on the other hand, import prices rise, there is inevitably on this account a loss of real income to be borne by the community as a whole. Each member of the community, however, will complain that prices are rising against him, and will try to pass the increase on to other people by securing a rise in his own money income.

And if indirect taxes are increased, for instance, as part of a government policy to reduce the spending power of the community generally, then again each member of the community will complain that prices are rising against him, and will try to pass the increase on by securing a rise in his money income.

The following table shows the shares of gross national product in various years received by various groups of income recipients:

Shares of Gross National Product

	1938–39		1950–51		1953–54		1958–59	
	£m.	%	£m.	%	£m.	%	£m	%
Wages, salaries ..	445	48·3	1,498	41·1	2,252	49·4	3,046	49·1
Farm incomes	44	4·8	780	21·4	499	10·9	408	6·6
Interest and rent ..	92	10·0	125	3·4	183	4·0	322	5·2
Depreciation	52	5·6	218	6·0	225	4·9	475	7·7
Other profits	167	18·1	721	19·8	908	19·9	1,175	19·0
Indirect tax and public business	122	13·2	301	8·3	494	10·8	771	12·4
GROSS NATIONAL PRODUCT	922	100	3,643	100	4,561	100	6,197	100

The stability of the shares received by wages and by other profit incomes in 1958-59, compared with 1938-39, is remarkable in view of the enormous economic changes that have taken place during these twenty years.

Even in 1950-51, which was the year of extreme boom in farm incomes, other profit incomes showed themselves well able to maintain and even to improve their position, while wage-earners suffered a severe reduction in their share.

The big loser over the period is the rent and interest sector, a more or less fixed income group which has suffered badly during the inflation of prices, but which has been doing rather better during the 50's with higher rates of interest and the relaxation of rent controls.

Farm incomes are subject to extreme fluctuations in response to changes in overseas prices and to seasonal conditions in Australia. These incomes were abnormally low in 1938-39 and are not very much better in 1958-59.

Depreciation allowances—an important source of internal funds

for private capital formation—have risen substantially. In the early 50's indirect tax played a relatively smaller part in total government revenues, with a relatively larger proportion of revenues being raised by progressive direct taxes on income. In later years an increasing proportion of government revenue has been raised by indirect taxes.

One is tempted to conclude that, so far as income distribution is concerned, all the economic cataclysms of the last twenty years could have been avoided by special measures to reduce the burden of indebtedness as measured by rent and interest payments; by flexible exchange rates supplemented by export taxes and subsidies to stabilize farm incomes; and by a willingness to force people, for instance by tax and compulsory savings policies, to save as much as was required to release resources for the big increase in investment in the post-war years.

On the other hand, however, it has probably to be admitted that the very pressure of excess demand has provided a forced draught for economic growth. Moreover, rapidly rising money wages may have encouraged labour-saving, productivity-raising developments, and have probably made people who generally suffer from a "money illusion" feel more satisfied with the level of their incomes.

Some Issues of Wage Policy

Are Wages Determined According to Needs or Capacity to Pay?

For many years it was insisted, following Higgins, that the Australian basic wage was based on "the normal needs of an average employee regarded as a human being living in a civilized community", but even the famous original Harvester Judgment of 1907, while it included an enquiry into the cost of food and rent, came down in the end to a finding of two guineas a week, which was what decent employers were currently paying.

The true significance of this judgment was not that it decided what a worker "needed" but that the awards based on the judgment eliminated sweated industries, as all minimum wage legislation everywhere has sought to do, and raised the minimum wage for all unskilled workers closer to that being paid by better employers, usually in protected industries. Any industry which could neither produce efficiently enough nor secure enough tariff protection to enable it to pay what decent employers were paying, would not be allowed to survive by means of exploiting its workers. This was certainly an advanced and good concept of wage-fixing, but it was not a needs concept. This was confirmed by the refusal, based on the grounds that it was beyond the capacity of industry to pay, to put into effect the 1920 finding of the Piddington Royal Commission that the needs wage should be £5/15/8 a week in comparison with the then Harvester equivalent of £4/13/-.[6]

6. Owing to the lag in the adjustment of wages to prices, the wage actually being paid at the time was only about £4 a week.

Again, in 1931 the Arbitration Court cut the basic wage by 10 per cent in an effort to distribute over the community generally the real loss of income being borne by farmers as a result of falling overseas prices. In 1937, the Court granted prosperity loadings of about 5/- a week on the grounds that industry could afford to pay.

During the 30's, members of the Arbitration Court Bench began to speak of capacity to pay as a basis for wage fixing. They had long been worried by the anomalous concept of the average family. A needs wage determined for an average family would obviously be much in excess of a single man's needs and much less than the needs of a family with a large number of children. The anomaly was reduced by the introduction of child endowment in 1941, covering all but first children, and its extension in 1950 to cover first children also. This meant that the special needs of large families were at least partly catered for outside the wage system.

In 1946, an interim basic wage increase of 7/- a week was awarded, and in 1950 a majority of the Court awarded a £1 increase in the basic wage on the grounds that it was within the capacity of industry to pay. In 1953, the Court formally adopted capacity to pay as the basis for wage fixing, though neither the Court nor commentators on wage determination have revealed how capacity is to be measured or whether it can be measured at all.

Wages can certainly be based only on capacity to pay. The implication is that wage-earners in general should get an appropriate share of gross national product, the share being determined mainly by profit-takers' apparently quite intractable concept of what is a fair profit margin. The main contribution of the Court has probably been to strengthen opposition to an increase in the profit margin; and to distribute labour's share more equally among individual workers, in particular preventing employers from exploiting their labour even where it is weak and unorganized.

Should the Basic Wage be Automatically Adjusted to Price Movements?

The 1907 Harvester standard was thought of at the time, by both workers and the Arbitration Court, as a needs wage. By 1913 there had been significant price increases, and it seemed logical to make a corresponding increase in the basic wage. Successive increases were granted as prices rose during the war and, from 1922 on, wages were automatically adjusted to price increases. In 1937, the Court persisted with its own logic when it refused to make the prosperity loadings, which were based on capacity to pay, subject to automatic adjustments. It was not until 1950 that this loading was incorporated in the basic wage and became subject to adjustment.

The rapid increases of the basic wage during 1951 and 1952, as a result of automatic adjustments to the rapidly rising index of retail prices, caused much alarm and re-appraisal. In the 1953 basic

wage case, the judges dropped their bombshell. The automatic adjustments, a long-established and internationally admired and emulated feature of our wage determination, were abandoned, and the judges have ever since refused to restore them, on the grounds that the wage is determined by industry's capacity to pay, which is not measured by a price index, and that the adjustments have accelerated price increases and made business administration expensive and planning difficult.

It is common ground that wages are and must be determined by capacity to pay. The real issue is whether a price increase represents an increased capacity to pay.[7] In some circumstances, a price increase does reflect an increased capacity to pay. For instance, if prices rise internally because export prices have risen, or because employers are enjoying a sellers' market and decide to take higher profits, then there is an increased capacity to pay and wages should go up as they would under the system of automatic adjustments. The case for automatic adjustment is all the stronger, since it means that if prices fall internally because of a fall in export prices or profit margins, wages also will fall.

These are normally two especially important causes of price movements in Australia, and have provided the rationale for the system of automatic adjustments. To the extent that these have been the cause of price movements, the system of automatic adjustments has meant that money wages have been varied with changes in the money value of productivity. For this reason, I personally would not, if I had been responsible, have abandoned automatic adjustments.

But now that they have been abandoned, I would not restore them. I would prefer, as a basis for wage awards, the present system of a regular review of capacity to pay generally, including an investigation of why prices have changed.

If prices have risen for the reasons mentioned above, there is a *prima facie* case for a wage increase. However, if prices have risen because import prices have risen, then there has been a loss of real income to the community as a whole. Similarly, if prices have risen because the Government has imposed higher indirect taxes in order to cut down spending power, the Government has presumably intended that the cut in spending power should affect the community as a whole. In both cases, there is a *prima facie* case that workers should take some share of the burden, and should not be able to pass it on completely by securing an increase of money wages.

Finally, if prices have risen because of a preceding wage increase generated by excess demand, or by trade union pressures, there is no logical reason for pushing wages up again to compensate for a price increase caused by this earlier wage rise.

7. The Honourable H. E. Bolte, Premier of Victoria, appears to think it does. He recently publicly welcomed a cost of living increase as a sign of increased prosperity, in which, however, he does not allow Victorian workers to share.

How Should Money Wages and Other Incomes be Fixed?

In an ideal situation, there would be no excess demand and export incomes might be stabilized over the long period by exchange variations or by export taxes and subsidies. Then, if it were agreed that higher import prices and tax levies should be borne by the various sectors of the economy according to the existing pattern of income distribution, the ideal money income policy might be to keep all money incomes (including wages and profits) stable in the short period. Over the longer period, it might be hoped that as workers became more skilled and productive, and as capital became more plentiful, there would be a shift of income distribution towards wages—partly directly, through an increase of money wages at the expense of profits, and partly by redistribution through increasing social service benefits financed by progressive taxes on income.

How are Productivity Gains to be Realised?

In this ideal situation, provided the economy were adequately competitive, productivity gains would accrue in the form of falling prices which would yield increased real incomes to all sectors of the economy. In fact, however, prices are sticky downwards, and competition is imperfect, so that productivity gains might be passed on only partially and slowly, much of the benefits being taken out in profit increases and in unnecessarily expensive additions to the quality of products.

Moreover, the "money illusion" makes most people feel happier if their money incomes are rising, and they probably prefer rising money incomes with stable prices to stable money incomes with falling prices. It has therefore become fashionable now to argue that money incomes—especially wages and profits, but not usually rent and interest—should rise in step with productivity, with prices remaining stable. Some would go further and accept slightly more rapid wage increases as an incentive to labour-saving and productivity-raising innovations, even if this means a slight rise in prices. It should be noted that, on this basis, the relatively more sticky money incomes will not share fully in productivity increases, leaving a greater benefit to be enjoyed by wage-earners and profit-takers.

It may be asked how workers have shared in productivity increases during the long period when their wages were automatically adjusted to price changes. It would appear that real wages should have remained stable, with any price falls induced by increases of productivity being matched by reductions in wages. In fact, increases in real wages could have been secured from two sources. In the first place, the wage has from time to time been adjusted upwards, independent of price movements—for instance, the Powers' 3/- of 1922,[8]

8. In an article published elsewhere in this issue, Mr. H. P. Brown points out that this Powers' 3/- was not, as had long been thought, a grant intended to compensate workers for the lag of wages behind prices.

the 1937 prosperity loading, the 1946 interim increase of 7/-, the 1950 increase of £1, and the several increases since 1953.

Secondly, we have found, earlier, grounds for presuming that price indexes overstate the true rise of prices, so that automatic adjustments of wages to price indexes would conceal a rise in living standards.

Can Money Incomes be Restrained so as to Avoid Inflation?

The main economic question for Australia is, if the level of demand is kept high enough to maintain full employment and a high rate of economic growth, will wage-earners and profit-takers be content with money incomes rising by no more than 2 or 3 per cent a year, or will they respond to the pressure by taking higher money incomes and so forcing price increases? Some observers have feared that a substantial slack in the economy, involving perhaps 5 to 10 per cent unemployment, might be necessary in order to keep inflation within tolerable bounds. Recent investigations, however, suggest that a slack involving 3 to 4 per cent unemployment might be enough.[9]

But we do not want unemployment as high as this. We have not suffered such a rate of unemployment in the last twenty years, and we should prefer a lower level to be maintained in the future. The pressures exerted by employers and unions are therefore a vital factor in our economic future. A better informed and more co-operative attitude from both parties is needed if their demands for higher money incomes are to be satisfied without undue inflationary pressure. On their attitude depends the possibility of our securing a happier compromise between stability and full employment and economic growth.

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9. See A. W. Phillips, "Unemployment and Inflation in Australia, 1947-58", to be published in a forthcoming issue of *The Economic Record.*

THE TRAINING OF AN ECONOMIST

The Art of Political Economy

Douglas Copland needs neither praise nor appraisal from me. His name and his work are known in Cambridge, Harvard and other places where they teach economics. He has left a decisive mark upon economic policy at crucial periods of depression and war in the history of his adopted country and also in the land of his birth. He has wrestled with the great and well-bespoke on both theoretical and practical issues and often won his point. He has been the spokesman of his country in China and Canada and in the councils of the Commonwealth and the United Nations. Writing, editing, speaking, teaching, administering, and often fighting, he has lived a full life and the record is there for anyone to judge.

The best economists quite often play many parts. "While affecting the serious and reserved air of students they have all the time been found brawling in the market-place." Instances are not hard to find. The economist of the ivory tower, fashioning recondite tools of analysis, may achieve a place in the literature, as Cournot did after despairing of recognition; but the great theorists have usually been protagonists of causes. Indeed the analytical tools they fashioned were often hammered out in the heat of controversy and for controversial purposes, to live on and be used for quite different purposes in irrelevant circumstances.

The reason for this controversial vigour of well-known economists is quite simple, but it is also quite fundamental. It could perhaps be summed up in the popular saying that circumstances alter cases. But it deserves the fuller statement at which A. G. Papandreou recently arrived after a rigorous logical examination of the nature and limitations of scientific economic propositions.

"The fact that economic models are strictly explanatory devices does not mean, of course, that economists are unwilling to make predictions. Indeed, often enough they are called upon to do exactly that. What it does mean is that predictions based on models are necessarily dependent upon the state of mind of the economist about to make a prediction. If I am called upon to make a prediction concerning the effect of some tax measure on income or employment over the next three years, I will have to choose that model (among many alternative models) in terms of which the prediction is to be made, which in my opinion stands the best chance of being confirmed by the observations on x over the next three years.

"We may formalize this process of choosing a model by arguing that the economist about to make a choice of a model is guided by a *subjective ordering* of models with respect to the likelihood of their confirmation by reference to data relating to a given historical individual such as, say, the U.S. economy for the period 1960-63. Success

or failure on previous occasions will no doubt affect the subjective ordering, but will turn out to be a very poor guide if the underlying economic structure is subject to sudden temporal or significant spatial changes. We cannot escape the fact that the ordering of models with respect to the likelihood of confirmation is a highly subjective matter. Forecasting on the basis of models is and will remain an *art.*"[1]

Training in the Art

Since economists are increasingly called upon to practise this art of prediction, and few of them are willing to remain pure scientists in the sense of confining themselves to explanatory models, it is of some interest to consider how they may be trained in the art as well as the science. In Papandreou's language this involves "characterizing social space and giving it an appropriate place in the construction of economic theory".[2]

Until such time as this characterization of social space provides economists with positive proof of the applicability of particular models in specific circumstances, they must cultivate their judgment as to the applicability of such models. It has often happened that an economist (or even a layman) with limited analytical equipment but a shrewder judgment of the imponderables in social space has been able to make a more accurate prediction, and therefore give sounder advice on policy, than one with greater command over a more elaborate array of models, but less judgment as to their applicability. This is not to decry the tools of our trade. The keener their edge, the more effective they may be in the hands of a master craftsman. It is merely to state the obvious fact that simple and even crude tools in skilled hands can often produce results superior to those of much more elaborate techniques in the fumbling hands of those unfamiliar with the material to which they must be applied.

The question suggested to my mind by reflecting on the career to which *The Economic Record* pays tribute is what can be done to train economists so that, with the better tools now at their disposal, they may become more successful practitioners of their art?

No doubt a large part of the answer to this question depends upon the economist himself and the pit out of which he was digged. A great deal must depend also upon the environment into which he is launched. *Prima facie*, one who is born of Scots parentage and starts his professional life in a rapidly developing and literate Dominion on the eve of a great war, is blessed with a head start.

1. A. G. Papandreou, "Explanation and Prediction in Economics", *Science*, Vol. 129, No. 3356, April 24, 1959, p. 1099. Cf. also A. G. Papandreou, *Economics as a Science*, Lippincott, Chicago, 1958. Author's italics.

2. Note that Papandreou denies that existing economic models can properly be described as theory since they "provide explanations of economic behaviour in those circumstances in which they are confirmed, but they cannot be used as predictive devices because the conditions of their applicability cannot be spelled out beforehand". This is equally true of the "augmented models" which econometricians quantify to carry out relevant tests.

Some part of the answer also must lie in the personality and character of the teachers rather than the content of their courses. But what I have to say on this aspect of the question I have already written concerning the teacher who took us when we were respectively a training college student teacher and a customs cadet and turned our feet into economic paths.[3]

Certain obvious statements may be made rather categorically. The logical limitations of the models taught to economic students should be made very clear to them so that they do not mistake these abstractions for reality. It has often seemed to me that it might be wise to postpone the teaching of economics as such to the graduate years, or at least to the latter and presumably maturer years of undergraduate training. This could be combined with insistence on pre-requisite courses—a good deal of mathematics and mathematical logic, modern languages (including English) and economic history—in their earlier undergraduate years. Properly prepared in this way, a mature student could quickly master the essential propositions and models used by economists. This would involve selective teaching, sacrificing much of the welter of current literature through which even the undergraduate student is dragged to his mystification; but it need not, and should not, omit to demonstrate to him the great systems of past thought (including the Marxian) and their relation to past controversies. What it would sacrifice is primarily the minutiae of special cases (and special pleading) and oddities with which aspiring candidates fill the journals and which pass so rapidly into oblivion. Who, ten years hence, will read the articles and texts on which so many examination questions will be set (or so the students fear) this year? The minutiae and oddities have their importance, but this is for the specialist, not for the beginning student who, as a blind friend once remarked to me, needs first to know the fundamentals—size, proportion, material, colour—before he worries about decoration.

But this again comes down to the personality and character of the teacher. If he is sufficiently master of his subject to be able to rise above the minutiae or fit them into their proportionate place, the student will not fail to grasp the structural outlines of his teaching.

Participation in Research

The experimental sciences are not very good models of method for social scientists to imitate—at least not the physical sciences, though some biological studies offer more analogies with the complexities that economists face. But in one respect, their pedagogy, especially at the graduate level, they have much to teach us. The seminar replaces the lecture and is built around some leader in research. The current literature is combed for relevant devices and

3. Cf. *Liberty and Learning: Essays in Honour of Sir James Hight*, Whitcombe and Tombs Ltd., Christchurch, 1950.

suggestive hints, but is quickly discarded as it ceases to be relevant. The emphasis is on experiment, learning is ancillary to measurement and discovery—what's past is prologue. The result is that scholasticism, the exegesis of sacred texts, plays little part in the scientific schools. Text-books are replaced by books of reference continually revised and rewritten. Expected to find new facts and develop new ideas, the students respond in remarkable fashion. The dead hand of orthodoxy is replaced by the challenge of the unknown. Hence the freakish contraptions and wild ideas, some of which yield such surprising results.

Inanimate, and even animate, nature is one thing and human nature another. The open sesame of experiment is denied to the economist. But observation and measurement are not. If more graduate teaching were a by-product of research, the budding economist would acquire a greater facility in the use of his tools and a greater awareness of their limitations. He would also acquire his tool-kit more rapidly if he had a genuine rather than make-believe use for it.

This point is perhaps worth a little further elaboration. Personally I am far from advocating the preparation of ponderous theses. Indeed, I regard the worship of the Ph.D. degree which the Americans took over from German universities as perhaps the worst disaster that ever befell the social sciences and the humanities. The compilation of a thesis is indeed often the antithesis of what I am trying to suggest, which is that the graduate, and even the senior undergraduate, student should acquire a large measure of his training by being actively associated with the research studies of his teachers. A teacher who is actively engaged in exploring the applicability of some range of models to the specific circumstances of economic reality can make the models live. He is also likely to be prolific in suggestive ideas for measuring, testing and analysing the relevant phenomena. It is a poor student who cannot pick up some idea which he can make his own and use in a minor exploration of his own interest. It goes without saying that the farming out of specific fragments of the teacher's own problem, to be worked on by his pupils (and often appropriated with scant, if any acknowledgment) should be sharply distinguished from the stimulation given by a scholar who is excitedly pursuing his own research. The former is usually the practice of a dull as well as dishonest pedant, whereas the true research scholar is like Falstaff, "not only witty in himself, but the cause that wit is in other men".

The Non-University World

When I was a young teacher in New Zealand, I received a severe shock when marking masses of examination papers in Economic Geography. I had set a perfectly proper question: "Wellington and Nelson were founded in the same year. How do you account for the greater growth of Wellington?" Drowsing through the bluebooks

one hot summer afternoon I came across one (evidently written by a Nelson College boy) with all the text-book answers correctly listed, but with a postscript attached. "P.S.," he had written. "Speaking for myself, and geography apart, I think a lot of the trouble is due to the Nelson City Council." I gave him full marks, but I have worried about that phrase "geography apart" ever since. How many of our students, in their private capacities, as individuals and as citizens, formulate their opinions "economics apart", which in most cases means they fall back on current prejudices and partial information derived from hereditary and parental influences, newspapers and casual gossip?

Surely part of our responsibility as teachers of economics is to give our students some systematic notion of the environment in which they will spend most of their lives—Papandreou's social space —and to which, if at all, they must apply their economic models.

In this respect the university is rather a poor preparation, a quite unusual and a-typical segment of social space. The high value it gives to verbal comprehension, exactness of expression, and generally to abstract ideas, and its failure to appreciate other (perhaps less admirable) qualities such as aggressiveness, toughness, decisiveness, or the lack of them which results in the inertia of much social space—this concentration on verbalism to the neglect of action is what makes university committee discussion (and administration generally) so extraordinarily impractical and time-consuming. The real world isn't like this. Nor is it like the smooth abstractions of the economic texts. It moves, jerkily and irrationally, but it moves. The rapid adjustment of fine margins as a result of even more rapid abstruse calculations may be a reasonable approximation to Ricardo's Stock Exchange background, but it has always been remote from agricultural processes or craftsmanship. This is perhaps why it is so easy to construct economic models in national accounting terms and so difficult to incorporate in those models the human (and physical) imponderables. It is important therefore to find ways in which fledgling economists may be exposed to the real world not by disorderly casual contacts but as a means of testing their systematic models of thought.

When Douglas Copland and I were fledglings, the Workers' Educational Association was in its pristine vigour in New Zealand. We shared the first tutorial classes in Christchurch and Wellington, since he took over from me when I went to the Statistician's office in Wellington, and again when he succeeded me there and took over the Wellington classes on my return to Christchurch. Both these classes included active trade union secretaries, Marxian agitators, leaders of women's movements, political organizers, and other tough and mature individuals. Attendance was almost perfect and discussion vigorous. In the Wellington class were several who later became members of the first Labor Cabinet, including two future Prime

Ministers, Peter Fraser and Walter Nash. The Christchurch class also included future parliamentarians and at least one Minister, Tim Armstrong, and its mainstay, E. J. (Ted) Howard was later Speaker of the House of Representatives.

Keeping abreast, if not on top, of the discussion among such characters was a liberal education in the penumbra of economic reasoning. It was a long time before I recovered from the embarrassment into which I fell when Harry Holland, then editor of the *Maoriland Worker* and a profound Marxian scholar, casually asked me if I wasn't a Utilitarian, and I didn't know whether I was, or indeed quite what he meant. Every week these men and women, nurtured in a hard school, listened patiently while we paraded our economic models before them and then, kindly but firmly, tested their applicability to the segments of social space with which they were familiar. It was the tutors, rather than the workers, who were educated.

In one respect, at least, the beginner now has greater opportunities and has indeed entered into the fruits of our labours. We had to make our own international contacts and even organize the first institutional arrangements for international study and discussion. Apart from the round table groups which were very private and select groups of imperially-minded senior citizens (including an occasional professor) there was literally no means of acquiring information, still less of meeting people, from foreign countries. The Royal Institute of International Affairs was not organized until after World War I, and for many years did not get further than enrolling a few colonial members. It was not till the Institute of Pacific Relations held its first conference in Honolulu in 1925 that Australians and New Zealanders began to organize their own voluntary associations. Characteristically we faced the new shaky institutions—which are now so well rooted—both ways, to the Pacific and to the centre of the Commonwealth, and thus set a pattern which other members of the Commonwealth have followed.

The breaking down of the barriers of international ignorance that has taken place should not be taken lightly. It called, especially at the beginning, for an immense voluntary effort on the part of a few enthusiasts. Douglas Copland will recall the constant effort necessary to enlist the interest of at least a nuclear group, the shoestring finances, the discouraging innuendos of the complacent that those not content with Empire were cranks and probably disloyal. Much of this activity, especially in research, sprang from the grants made available through the Institute of Pacific Relations before it fell into persecution and disrepute in the United States. The wars and the subsequent creation of international institutions helped greatly, but there were long years of thankless work before the present flow of information (and persons) became possible. Now governments, powerfully aided by the great American foundations, have taken

over. An economist is unlucky if he cannot pursue his studies abroad. Foreign colleagues and students are no longer infrequent curiosities. There are considerable opportunities to acquire some knowledge of environments different from one's own.

What should be said, finally, of the economic groupings of the working world—manufacturers and merchants, agriculturists and graziers, as well as trade unions? The professions, even those such as the law and engineering whose activities impinge on those of economists, are apt to be difficult, and even superior, in their technical insularity. But this is not so true of those who, with less specific technique, organize the activities which provide economists with most of the raw material to which their models must be applied. The bigger their operations, the more they welcome systematic analysis by disinterested scholars.

Chambers of Commerce, at least in the United States, are not as a rule thought worthy of consideration in the best economic circles, though there is august precedent, dating back to Adam Smith at least, for economists consorting with merchants. His well-known dictum on the nefarious conspiracies of such mercantile groups seems to indicate that he at least was able to touch pitch without being defiled.

What is important in the training of economists is exposure to the peculiar aspects of social space inhabited by merchants and entrepreneurs. It has always seemed to me a weakness of the academic character to fear that such exposure must inevitably corrupt the young. One can always retire to the cloisters. The fact of the matter is that one is exposed to temptation whatever one does. There are those who rather hope, or at least are reconciled to the possibility, that "wiv a little bit of luck" they may give right in. But such are just as likely to be seduced by academic as by commercial rewards and to end up as deans rather than business consultants. That some fall by the wayside is no argument against exposing the young to contacts with what after all is an important, if not the most important, aspect of social space with which economists are concerned. The important thing is to persuade them to play the field and avoid emotional attachment to particular interests. Only then can they learn dispassionately to test their models of cause and effect until they learn which of them is likely to yield understanding, and ultimately mastery, of events.

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TEACHING ECONOMICS IN AUSTRALIAN UNIVERSITIES

A large part of Sir Douglas Copland's life has been devoted to the teaching of economics. It is, therefore, the purpose of these notes to offer by way of friendly tribute some generalizations on the present state of economics teaching in Australian universities, making occasional comparisons with Britain or the United States. My generalizations are, of course, based specifically on my experience as a successor of Sir Douglas Copland in Melbourne, but I have tried to make them as wide as possible. I hope that in doing so any misunderstanding on my part of the situation elsewhere will not give undue offence to my colleagues in other universities. I also hope that I shall be forgiven if I have no generally acceptable solutions to offer for our common problems.

I

In Australian universities economics is typically taught in a compulsory three-year major as part of a specialized or semi-professional degree course, such as the B.Com. in Melbourne or the B.Ec. in Sydney. The difference in terminology is partly accidental, partly intentional. Thus, one-year courses in Accountancy and Law are compulsory for the Melbourne degree, but not for the Sydney degree. Some universities have both degrees, one being intended for students who seek business careers, and the other for students seeking careers in public administration or teaching.

Economics is also taught to Arts, Law and other students who for the most part seek a one-year survey course.[1] In fact, this was the form in which the subject was originally introduced. In Melbourne, for example, a course in Political Economy, taught by the redoubtable Dr. Hearn, was one of the first offered when the university opened its doors in 1855. It was not until 70 years later, when Sir Douglas Copland was appointed to the chair of Commerce in 1924, that the B.Com. degree was instituted, and since that time B.Com. students have greatly out-numbered Arts, Law and all other students in the economics classes.

Most Australian universities also offer honours degrees, in the English sense of courses which permit intensive specialization upon economics. These degrees are normally taken, however, only by the very good student who aims at being a professional economist. From the university teacher's point of view, of course, these are the students who are most worthwhile, and certainly it is on them that the academic reputation of a department largely depends. These honours courses will therefore be discussed separately below; in this and the next two sections we shall be concerned with the courses provided for the great

1. In Melbourne, however, majors and honours degrees in economics are also available to Arts students, and in Western Australia economics is taught entirely within the framework of the Arts degree.

body of B.Com. or B.Ec. students, who study economics throughout their university careers, but do not generally devote more than about one-third of their time to it. In the provision of these courses Australian universities are nearer to the Scottish than the English model.

A three-year major in economics offers the opportunity of covering at a reasonable standard the more important branches of the subject. Much depends, however, on how we arrange our subject matter, and in particular on how we allocate it between first and subsequent years.

The traditional practice in Melbourne, as elsewhere, used to be to provide a first year introductory course which gave a general survey of the subject as a whole. The coverage, however, was necessarily thin, and teachers often found themselves compelled to go over much of the ground again in subsequent years. Moreover, after the publication of Keynes's *General Theory* text-books became a problem. The older ones (like F. W. Taylor's *Principles of Economics*, which was used for many years in Melbourne) became outmoded, and new ones that took full account of contemporary changes in thought were slow to appear. In any case, since most students were enrolled for a three-year major, there seemed little point in trying to cover the whole subject in broad outline in the first year, however useful or attractive that might be to students from other faculties who would not continue their studies further.

Some ten years ago we began in Melbourne the experiment of confining the first year's work to topics such as economic organization, the equilibrium of the firm, supply and demand and labour economics; postponing to the second year income, money and employment theory; and leaving the student free to choose in the third year one of several more specialized courses such as Public Finance, International Trade, etc. The net effect of this arrangement is to spread the introductory work over two years, dealing with micro-economics in the first year and macro-economics in the second. It also has the incidental advantage of reducing the size of each of our third-year classes.

It would be idle to pretend that we have found a completely satisfactory solution to the first-year teaching problem, but on the whole, experience has justified the experiment, and we have been able to teach to higher standards in both first and second years. There might, of course, be something to be said for reversing the order, and teaching income, money and employment in the first year, since these are the subjects over which policy questions generally arise and which are therefore likely to interest students more readily. On the other hand, the student would then be brought up against concepts such as "marginal propensity to consume" and "aggregate demand" without having had a grounding in the more general and logically prior usage of the marginal concept, or of supply and demand curves. For this reason we prefer our present arrangement, but others might well think differently. However, our arrangement

leaves unsolved the problem of devising a suitable one-year course for those who for quite good reasons are unable to proceed further.

II

In addition to his economics major the typical B.Com. or B.Ec. student will also take one or two additional majors or sub-majors in Accounting, Public Administration, Economic History, Geography, Statistics, etc. Professional "business" subjects on the American pattern have not been greatly developed, but Industrial Relations is now fairly common, and Melbourne also has Marketing. Particular interest and importance attaches to university courses in Accounting, which are much more highly developed in Australia than in England. These courses take the student beyond the requirements of the professional institutes, and since passes in them confer exemptions from certain professional examinations, the good student has a much superior alternative to the coaching colleges and correspondence schools on which he would otherwise have to rely.

Degrees are granted on the basis of examination passes in a minimum number of prescribed units or "subjects". In Melbourne, for example, passes in twelve subjects are necessary for the B.Com. degree, which implies that in order to complete his course in three years a student must pass in four subjects each year. A substantial proportion of students are part-time, however, and in their case the course can be spread over a longer time by reducing the number of subjects taken each year. This, however, does result in a gap of one or more years between the successive units of the student's economics major, a fact which not infrequently creates problems for the teacher.

This unit system of examining contrasts with the system of examining each year's work as a whole, which is common in England and which is adopted by Australian universities also for their specialized honours degrees. Such a system, however, is hardly feasible for a general degree like the B.Com. or the B.Ec. where the student may be sitting for examinations in several heterogeneous subjects, passes in some of which confer exemptions from the requirements of professional bodies. In these circumstances it would be both impracticable and inappropriate to offset the student's excellence in one subject against his weakness in another.

The major significance, however, of the unit system of examining is that it permits students to pursue their courses on a part-time basis. In all Australian universities, part-time students are a substantial proportion of those attending economics classes, the proportion in Melbourne being now about one-third. This proportion has fallen greatly since before the war, partly as the result of increased student aid by way of Commonwealth scholarships, etc., and partly as the result of the attraction to Commerce and Economics of students who would otherwise have enrolled for full-time study in Arts or

Law. Nevertheless, although the proportion of part-time students is no longer as large as formerly, it is still large enough to impart a sense of purpose to the student body which it might otherwise lack.

The fact that many of our students study economics against a background (academic or practical) of accounting and public administration gives them a natural interest in realistic applications of economics and in economic policy. This provides the teacher with a valuable basis on which to build, but of course it needs to be supplemented by a training in rigorous thought and analysis, particularly when economics is the major academic component in the student's course.

From time to time, most of us have no doubt thought how much easier this would be if we could assume or require a knowledge of first-year mathematics. Apart from the difficulty that ordinary mathematics courses and texts are primarily orientated to the needs of natural scientists, however, such a requirement would be open to the objection that it might well exclude some students who would make quite good economists. The difficulty is that the problems likely to meet the economist once he gets outside the study or class-room are rarely mathematical in character. They are much more likely to involve matters of human judgment and valuation for which a training in the humanities is really more relevant.

Hence the training in rigorous thought and analysis which the student undoubtedly requires must be provided in our own courses, supplemented where possible by the relevant mathematics for those who can benefit from it, and some training for all in Statistical Method. Some universities have introduced completely separate and parallel courses on descriptive economics and analytical economics. In Melbourne, on the other hand, we have always tried to combine empirical and theoretical work together in the same subject. It has also been our custom wherever possible to prescribe a few standard treatises in each subject, with the object of familiarizing the student not only with fundamental principles, but also with the mature thought of some of the great masters. This in itself has considerable educational value even if the student is not brought quite up to date on periodical literature—a difficult task, anyway, with large classes and ordinary library facilities.

III

In most Australian universities the main problem in teaching economics is the number of students to be catered for. The late Sir Ernest Scott in his *History of the University of Melbourne* records how in 1924 the newly founded School of Commerce ". . . . beat all previous records within this University by enrolling 300 students in the first year, and succeeding years showed progressively increasing numbers; a fact which demonstrated the need for its creation".[2]

2. Page 206. (M.U.P., 1936.)

The enrolment of the Melbourne Faculty has now reached 1,400 which, when Arts and Law students are added, gives a first-year economics class of 650, and a second-year class of about 400. In these circumstances, there is obviously room for more than one institution, a development which has already occurred in Sydney and which is promised (but not very convincingly so far as economics is concerned) in Melbourne. In the meantime, the Faculty has found it necessary to reverse the traditional Australian policy of the "open door". In the past, Melbourne, in common with other Australian universities, has accepted enrolments from all students who are qualified to matriculate, and before the war the Faculty admitted even non-matriculated students to a Dip.Com. course, but this was abolished in 1947. The Faculty has now imposed an annual quota of 500 on new enrolments for the B.Com. course, but it will be some years before our numbers become finally stabilized.

The formal lecture is the traditional university method of imparting instruction to large classes, but even the lecture system breaks down beyond a certain size. The student finds it difficult to hear the lecturer (even with a public address system), and impossible to see the blackboard, while the lecturer finds it difficult to maintain contact with his audience. Not all lecturers are good orators, and in any case what is required in teaching economics is systematic exposition, not oratory.

Some large American universities have tried to meet this situation by abandoning the lecture system as such, and dividing the class into "sections" of about fifty students. Each section is under an instructor or "section-man", whose job is to take his section through the one prescribed text-book chapter by chapter each week. On the other hand, Australian universities have retained the lecture system, preferring if necessary to reduce their classes to more manageable size by splitting them into day and evening divisions, and supplementing the lectures with small discussion or tutorial groups. In this way the lecture course still takes precedence over an impersonal text-book, and some opportunity for contact between students and staff is retained at least in the tutorials.

When lecture courses are duplicated, it seems desirable that they should be given by the same lecturer. With different lecturers, problems of co-ordination are almost inevitable. The same lecturer cannot, however, take more than a few of the tutorials that must be provided for a large class, and the others have to be given by colleagues, graduate students or part-time tutors. The danger is that too much reliance may have to be placed on young and inexperienced tutors who often find it easier to lecture the students again, rather than to stimulate them in discussion. This can be counteracted to some extent, however, by using the tutorial as the vehicle for the discussion and return of written work, provided there is enough of it. The setting and marking of adequate written work is, of course, another major

problem with a large class, and reliance has to be placed principally on short tests and exercises rather than on the traditional "essay". Fortunately, in economics it seems more important that the student should be trained to write concisely and to the point, rather than to spread himself—often irrelevantly—on lengthy essays.

In Melbourne, duplicate lectures and tutorial classes were already provided in a number of subjects before the war, having been originated by Sir Douglas Copland. Now, however, our numbers have grown to the point where even these expedients are in danger of becoming ineffective. There are only two lecture theatres in the university that will seat more than 300 students, and neither of them is very suitable for our purpose. Last year, therefore, we had to provide not two but four parallel lecture courses in first-year economics, using two teams of lecturers. It was also necessary to organize and conduct 41 tutorial classes taken by 12 different tutors, the average number of students per tutorial being about 16. In the same subject over 2,500 pieces of written work were corrected during the year, and at the end of the year 900 examination papers were marked. Teaching on this scale involves problems of organization and co-ordination that can be solved only at the risk of quenching the spark of personal inspiration that is essential to good teaching.

This problem is not confined to the first-year class, but is beginning to arise also with the second- and even third-year classes. The teaching burden on individual members of staff can be kept within reasonable bounds by appointing additional lecturers and tutors. However, no fallacy is more widespread both within and without the universities than the belief that large student numbers can be coped with simply by acquiring additional space and additional staff. Even if both were readily available—which they are not—the administrative problem would still remain.

IV

As already indicated, honours degrees in economics tend to be taken only by a few very good students. The courses generally extend over four years of full-time study and, while leaving room for a selected sequence of supporting subjects, involve a high degree of specialization. Most of the teaching in the later years takes the form of seminar work and special classes distinct from those provided for other students. Personal contact is thus possible between honours students and senior members of staff to a degree which is impracticable in large classes.

Australian universities have been criticized because comparatively few students take honours degrees. This is partly a matter of deliberate policy. Instead of regarding all students as potential honours candidates until the contrary is proved, which seems to be the English practice, Australian procedure is to regard all students as ordinary degree candidates until they give evidence of outstanding ability.

In Melbourne, for example, students are not admitted to the honours school unless they have shown good results in their first two years. The number admitted varies between eight and twelve, but normally all obtain Firsts or top Seconds. This may seem unduly restrictive, but even if there are some outstanding candidates whom we miss, or who prefer for one reason or another not to take the honours degree, the number cannot be large. It seems preferable to concentrate our teaching effort on a few good candidates rather than to diffuse it over large numbers who would in the end graduate with only lower Second or Third class degrees.

Until about ten years ago, the honours degree in Melbourne required a three-year course, like the ordinary degree, but the course was increased to four years because it seemed too crowded, particularly in the final year, and students were finding it increasingly difficult to cover the work expected of them. Personally, I am not convinced of the wisdom of the change. Our full-time students are probably somewhat younger than those in (say) Cambridge, but the psychological strain on the student of a highly competitive course lasting over four years is very great, perhaps too great. It was originally intended that the third year of the extended course would be largely free of examinations, but this has proved to be impracticable. In any case, it is doubtful whether the product of the four-year process is 33 1-3 per cent better than the product of the three-year process.

The two chief academic arguments in favour of the four-year course are that it permits (a) the inclusion of an adequate range of supporting subjects, and (b) some training in research techniques. A long-standing requirement of the Melbourne honours degree is a short research thesis amounting to perhaps 20,000 words which the student is required to submit in his fourth year. A research seminar meets regularly at which reports on the progress of theses are discussed. In addition to the training in the handling of research materials, the research done in this way is often worthwhile in itself. On the other hand, there is some danger of students allowing their thesis work to drag on, despite injunctions to the contrary, until it interferes with their preparation for the final examination.

It is sometimes argued that research and research-training should be post-graduate pursuits. If there were any assurance that honours graduates would stay an extra year and take a Master's degree there would certainly be something to be said for omitting the thesis from the honours degree, and this might permit a return to a three-year course. Unfortunately, economics graduates have few inducements to undertake full-time post-graduate research in Australia. Those seeking academic careers are naturally anxious to study at some research centre overseas, and we encourage them to do so, but we receive only a trickle of overseas research students in return. Outside the universities we have never succeeded like the natural scientists in creating

a market for Masters' or Doctors' degrees. From the point of view of employers, whether public or private, all that matters is the first degree, and if necessary they are prepared to undertake their own research training. Post-war employment opportunities have made university research grants unattractive. In consequence, there are today actually fewer full-time research students in Melbourne than before the war, when graduates were often glad to accept meagre research grants. When the university's role in research and research-training is already so restricted, it seems important to retain the thesis requirement in the honours degree even if this involves an extended course.

Although the number of full-time research students is small in Australian universities, there is a surprising amount of interest among graduates employed in the public service or private industry in undertaking work for Masters' degrees on a part-time basis. The ordinary B.Com. or B.Ec. graduate is generally required to take a fairly advanced economics course and to pass a qualifying examination before proceeding to write a thesis. In Melbourne we had 21 candidates for the qualifying examination last year. The actual task of writing a thesis often proves too arduous for a graduate while in employment, but a steadily increasing number are completed each year. This is obviously a development to be encouraged, although the major effort of the Australian universities will be, and must quite properly remain, directed towards the under-graduate.

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SIR DOUGLAS COPLAND AND THE MELBOURNE COMMERCE SCHOOL

When the University of Melbourne decided in 1924 to establish a Faculty of Commerce, it was fortunate to find in Douglas Berry Copland a man eminently suited to establish the new faculty. A handsome benefaction from Sidney Myer led to the establishment of the Sidney Myer Chair of Commerce, and Copland was chosen as the foundation professor for the new chair. Although only thirty years of age he had already made his mark as an economist and as a practical administrator. After a distinguished undergraduate career in Canterbury University College he had been awarded the degree of Master of Arts with first class honours, and later his Doctorate of Science (in Economics) by the University of New Zealand. His interest in the application of economics to practical problems appeared early, for his thesis for his Doctor's degree was *The Wheat Industry in New Zealand.* In 1917 he was appointed lecturer in History and Director of Tutorial Classes in the University of Tasmania. In 1920 he became Professor of Economics in the University of Tasmania, and held this position together with the Directorship of Tutorial Classes until he took up his appointment in Melbourne.

By this time Copland had already achieved maturity beyond his years, and had developed that blend of scholarship and aptitude in practical affairs which was to give its distinctive stamp to the Melbourne Commerce School. Copland brought to his new task his characteristic vigour and breadth of outlook, qualities which have distinguished his work in all fields of activity. He immediately realized that the way to success for the new school lay in training graduates who would make a direct and valuable contribution to the business community and government service, as well as to the study of economics in the academic sphere. He rapidly established friendly relations with both business and government circles, and attracted many students from both these spheres into the new Commerce School. By an arrangement with the Commonwealth Institute of Accountants, credit in a Commerce degree course could be given to members with full accountancy qualifications; as a result many able accountants undertook the study of economics at the University. In this way some extremely able mature students were enrolled in the early years of the School, and there is no question that the association has been of lasting value to the accountancy profession and to the Commerce School itself.

Copland's capacity for obtaining the co-operation of the public service and business community is a feature which has particularly marked the history of the Melbourne Commerce School. It is probably not too much to say that Melbourne has been more successful than

any of the other Australian universities in achieving this happy relationship. It was this co-operation, of course, which was also so successful in giving its stamp to the Victorian Branch of the Economic Society of Australia and New Zealand, which distinguishes it down to the present day. This has been well described by Professor Mauldon and Mr. G. A. Weller in their article on Copland's part in the foundation of the Economic Society.

Another quality which was of paramount importance in the success of the Melbourne Commerce School was the capacity that Copland had to attract first rate colleagues to assist in the development of the School. When I joined the School in January, 1930, as the first full time teacher of economic history, the nucleus of a first rate staff was already there. Gordon Wood had already made his mark as a teacher of economic geography and of economics, and had just published his well-known text-book *The Pacific Basin*. Frank Mauldon had come as a lecturer in economics, and a specialist in the field of industrial organization; he had recently published his book *The Economics of Australian Coal*. In addition, L. F. Giblin was appointed in 1929 as the first occupant of the Ritchie Research Chair in Economics. This was the extent of the full time staff in the Faculty at the beginning of 1930. But what a wealth of supporting talent there was amongst the part-time lecturers who so ably carried out such a large part of the teaching programme of the School in these early years. In accountancy both Alex and Garrett Fitzgerald were already established amongst the leaders of their profession, and Louis Goldberg had just joined the staff as tutor. Orwell Foenander and George Anderson had already made their mark as experts in the field of industrial law and industrial relations, and in economics we had G. A. Weller and C. V. Janes. All of these were already men of mature years, graduates of the School, who had distinguished themselves in their own field.

At this time the majority of students in the Commerce School were part-time students, and the dependence on part-time teaching was then very much more marked than it is today. Within the next few years Frank Mauldon was to leave the School to take the Chair of Economics in Tasmania, and it was mainly to replace him that Wilfred Prest joined the Faculty in 1938. By this time two distinguished graduates of the School had joined the economics staff: Jean Polglaze, who was to become the first full-time lecturer in Statistical Method, and Richard Downing, the present Ritchie professor. Soon afterwards Copland left the active service of the University in September, 1939, to become Commonwealth Prices Commissioner and economic consultant to the Prime Minister. By this time he had built up a staff which was unequalled in any Economics Faculty in Australia.

There was no mystery about Copland's success in obtaining and holding the excellent staff that he gathered around him. He had a

natural gift for leadership; he was a big man with nothing petty in his make-up. Having appointed a man to do a job he gave him responsibility and freedom to carry it out, with the assurance of loyal support whenever it was required. He had a real gift for delegating responsibility, and the members of his staff responded to his confidence and trust. His natural gift for leadership extended to all phases of university life, and was felt by students as well as by members of staff and colleagues. The part that he played in the life of the University and the community will be vividly remembered by those who had the pleasure of working with him during that period. Whether it was as Dean of the Faculty, or Chairman of the Professorial Board, or Acting Vice-Chancellor, his gifts for leadership were amply demonstrated. He infused vigour and enthusiasm into student activities. He could take part in their debates and their social activities with real zest. Discussions on matters of economic policy and economic theory were enlivened with robust good humour and a sense of fun. In cricket matches between staff and students, his left arm bowling could be devastating at times, and so was his powerful service on the tennis court. Students and staff of that generation will always remember him with a mixture of affection and respect. His teaching in the class-room was equally vigorous and down to earth.

Those who lived and worked with him during this period will always remember the stimulus and excitement that they gained from him. No one who was in the University of Melbourne in the early thirties will forget the public meetings held in the university on matters of economic policy. With the deepening of the world depression economic policy became a matter of paramount interest to all ranks of society, and these matters were vigorously discussed in public meetings organized by Copland through the Victorian branch of the Economic Society. I recall vividly also the intensely interesting discussions that went on between him, his fellow economists, Shann, Giblin, Melville, Dyason, Brigden, Wood and Mauldon, that preceded the formulation of the Premiers' Plan in 1931. This kind of activity which continued down to September, 1939, made life in the Commerce School a stimulating and exciting business.

But for all this interest in the application of economics to public policy, Copland did not overlook the claims of economic theory, and the attention that needed to be paid to economics as a scientific discipline. Although most of his writing was concerned with practical questions and questions of policy, he was always ready to debate and discuss questions of theory. It was therefore a matter of great satisfaction to him when he was invited in 1933 to give the Marshall Lectures in Cambridge; these were to be the basis of his book *Australia in the World Crisis, 1929-33*. Equally gratifying was his invitation to lecture at the Harvard Tercentenary Celebrations in 1936, and these lectures were published under the title of *The State*

and the Entrepreneur. An invitation to give the Macrossan lectures in the University of Queensland in 1935 provided the opportunity for him to publish his little book, *W. E. Hearn : First Australian Economist*. He has also earned the gratitude of students of this period for the excellent series of documents on the Australian economy which he published at various times in collaboration with E. O. G. Shann and C. V. Janes.

There is no question, however, that Copland's greatest talents lay in the application of economic theory to the practical problems of the day. It is this quality which undoubtedly gave an indelible stamp to the Melbourne Commerce School over the first twenty years of its existence. In 1944, the University created a second Chair of Economics with the help of benefaction from the late Dr. Truby Williams, and the Chair was appropriately named after him. At this stage Copland became the Truby Williams Professor of Economics and Gordon Wood, who had been Acting Professor throughout the war period, was appointed to the Sidney Myer Chair of Commerce. Fate was to have it, however, that Copland never really occupied the new Chair to which he was appointed, for shortly afterwards the Commonwealth Government prevailed upon him to take up the post of Australian Minister to China at Chungking. He formally severed his connection with the School in 1946, but he will always be remembered by those who passed through the School during his period of leadership. The School has continued to flourish in numbers, prestige and achievement, but there can be little doubt that its success is based very firmly on the leadership given in its first twenty years by Douglas Berry Copland.

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SIR DOUGLAS COPLAND AND THE FOUNDATION OF THE ECONOMIC SOCIETY

In 1925 only six of the ten Australian universities and university colleges had independent Chairs of Economics or Commerce, and of these the latest to be established was the Chair of Commerce in the University of Melbourne in 1924, commencing its active existence in 1925. In 1924 preparations began not only for the Melbourne School of Commerce which was to be headed by Professor D. B. Copland (later Sir Douglas Copland) for the next 21 years but also for the Economic Society of Australia and New Zealand which was firmly established with a Central Council, nine branches in the Australian States and New Zealand, and a high-standard half-yearly journal, *The Economic Record*, in 1925.

It is appropriate on an occasion which gives opportunity to pay tribute to Sir Douglas Copland's leadership in public affairs to recall the part he played in the origins and development of the Economic Society. Although attempts had before 1924 been made to establish some such body (an Economic Association had come into existence in New South Wales in 1888), circumstances before the mid-twenties did not offer strong enough backing for fruitful moves. The establishment of the new School of Commerce in the University of Melbourne under the enterprising and imaginative lead of Douglas Copland, then at the beginning of his thirties, was the major needed change in circumstances.

The liaison which Copland quickly established between his School and the business community, first in Victoria but later in other States and New Zealand, facilitated not only a direct two-way flow of ideas between the universities and the world of practical affairs, but also a forum in which the people capable of providing the flow could meet regularly; in other words, some such learned or semi-learned body as an economic society. Right from their beginnings in all States and New Zealand the branches of the Economic Society have in their programmes provided discussions of topics in which theoretical and practical issues have been blended. It was undoubtedly as much to the advantage of teachers and students in the universities that this kind of forum existed as it was to people from the spheres of business and public administration who constituted a large part, and in some branches the predominant part, of the membership of the Economic Society.

What, then, were the actual moves made to establish the Society? At the Adelaide meeting of the Australasian Association for the Advancement of Science in August, 1924, Professor D. B. Copland, President of Section G (Social and Statistical Science) submitted a plan for the establishment of an Economic Society. His initiative led to the plan being referred to a committee consisting of himself, C. H.

Wickens (A.C.T.), L. F. Giblin (Tas.), A. L. G. Mackay (S.A.), S. Bennett (W.A.) and Malcolm Fraser (N.Z.). The parental role of Section G is interesting to note; it gave its formal approval to a provisional constitution drafted by the committee and based on Copland's plan. Another provisional committee consisting of E. C. Dyason, C. H. Wickens and D. B. Copland was then given the task of taking steps to establish branches of the new Society. A detailed record of the establishment of these branches appears in the first issue of *The Economic Record* (November, 1925).

This provisional committee arranged for the holding of a conference in Melbourne on August 27, 1925. This was attended by representatives of four of the nine branches already formed, with two other branches represented by proxies. A constitution was finally adopted. The essential purposes of the Society, to use Professor Copland's words, "were twofold, namely, to provide for regular discussion and research on economic problems by business men, economists, statisticians, etc., and to arrange for the publication of an economic journal". The conference then constituted itself a meeting of the Central Council, the provisional committee being finally dissolved. It was decided to call the journal of the Society *The Economic Record*, and to publish the first issue in November, 1925, and thenceforward in May and November each year. This practice continued with minor variations until 1956. From that period three issues have been appearing each year—in April, August and December.

The first issue of the *Record* was notable for the first article appearing in it, written by the Commonwealth Statistician, C. H. Wickens, a contribution which, to use Sir Douglas Copland's words many years later, "remains the classic statement on Australian population growth".

The constitution of the Society, printed in full on pages 142 to 144 of the first (November, 1925) issue of *The Economic Record* and reprinted on pages 294 and 295 of the November, 1926, issue, provided for an Editorial Board of five members. D. B. Copland became editor-in-chief and continued in that position until 1945, a period of 21 years. During the war years he controlled the publication from Canberra, and only resigned from the heavy responsibility this entailed upon accepting the post of Australian Minister to China. Under his wise and inspiring leadership, supported by an able Editorial Board, *The Economic Record* on its first appearance attracted, and has since continued to attract, widespread attention, and to wield considerable influence in Australia and New Zealand and in countries abroad.

The Society also had the benefit of the devoted service of Dr. (later Professor) G. L. Wood as honorary secretary from its inception till his death on June 29, 1955.

In the early years of Sir Douglas Copland's editorship of *The Economic Record*, the task of contributing to its pages rested some-

what heavily on the relatively few economists, including Copland himself, whose work was to be found in the pages of almost every issue. With the expansion and extensions of schools of economics and commerce in Australian and New Zealand universities and university colleges, and the interest aroused by papers in *The Economic Record* and its occasional supplements, and by public pronouncements by Sir Douglas Copland and other economists, the number of trained economists has increased to such an extent that the offer of articles for publication exceeds that for which space is available, despite the fact that in recent years three issues have appeared annually.

Mention has already been made of the editing of the journal during the war years. When war broke out in 1939, the Prime Minister, Mr. R. G. Menzies, invited Professor Copland to the post of Commonwealth Prices Commissioner in Canberra. This he accepted, and throughout the war years edited *The Economic Record* from the national capital. Those were difficult years for the Economic Society and the *Record*. With the editor-in-chief in Canberra and the printers in Melbourne, distance produced problems which were added to by the printers' shortages of paper, type and staff, but with continued loyal co-operation all round very little delay ever occurred in the appearance of a number of *The Economic Record*.

It was fitting that the vigorous young New Zealander who came to Melbourne via Hobart in 1925 to be a vigorous adopted Australian should be elected the first President of the Economic Society of Australia and New Zealand, and the first President of the Victorian branch. For many years he continued to be the mainstay of the Victorian branch and the guiding spirit of the Central Council.

He was re-elected General President of the Society in the following year, but he and other senior economists early decided that it was undesirable for the President of the Victorian branch to serve for a second year—a practice that has sometimes been departed from in recent years.

The structure of the Society was planned to be a partnership of interests between New Zealanders and Australians. Professor Copland himself was responsible for this wise association in one body of the economists of two dominions. As he pointed out in his address at the University of Melbourne in May, 1950, to celebrate the 25th anniversary of the foundation of the Victorian branch of the Economic Society and of the Melbourne School of Commerce, the Economic Society is the only learned or semi-learned body which, apart from the Australian and New Zealand Association for the Advancement of Science, embraces both dominions and has worked with vigour continuously over a long period.

From its outset in 1925, the Society has continued to flourish, despite the fluctuations of membership in some of the smaller branches and despite threatening difficulties with the financing of the *Record* from time to time. We can but repeat what Sir Douglas

had to say of the Society in 1950: "In retrospect it seems that its establishment at that particular time (1925) was a most fortunate event, coinciding as it did with the emergence in Australia of economics as a science in its own right, a development which the Economic Society helped to foster. It could not be said in 1935, as we said in 1925, that 'economic research and advice are not recognized as necessary for good government, and the peculiar features of our economic organization have not been investigated in a systematic way'. Much of the credit for this transformation must go to the young Economic Society."

By the time Sir Douglas Copland had given up the chief editorship of *The Economic Record*, he had seen the circulation of the journal increase enormously, and what was more important had also seen a vast increase in intelligent economic discussion in the community, to which he himself had contributed in no small degree. He would, however, be quick to insist that much of the success attaching to his editorship came not only from his colleagues on the Editorial Board who had to share in making discerning choice of appropriate contributions for publication, but also from the writings of many willing contributors, including distinguished economists, statisticians, business leaders and public administrators who, though no longer with us, have left their imprint upon the pages of *The Economic Record*.

F. R. E. MAULDON
G. A. WELLER

GRADUATES IN COMMERCE

The keen and widespread interest in recent years, on the part of business and industry, in training staff, and especially prospective executives, may fairly be attributed in some measure to the vision and activity of the Dean of the Faculty of Commerce in the University of Melbourne—Professor (now Sir) Douglas Copland, over 30 years ago.

Douglas Berry Copland, born and educated in New Zealand, and for four years Professor of Economics in Tasmania, first came to Melbourne in 1924 as Sidney Myer Professor of Commerce and Dean of the Faculty of Commerce in the University of Melbourne, which latter post he held from 1924 until 1944. His first assistants were the late Professor Gordon Wood and Mr. (now Sir) Alexander Fitzgerald. Soon after the Faculty of Commerce became well established, Copland was confronted with the problem of finding suitable positions for his graduates.

Up to that time, there was comparatively little intercourse between the University and the City, and relatively few Melbourne business houses employed University graduates on their administrative staffs. Copland, being one of those people who get on in this world by looking for the circumstances they want, and, if they cannot find them, make them, decided to bring before the business community the need to begin to train young men to meet the increased responsibilities which a changing world was beginning to impose.

His wide outlook at that time convinced him that increasing scientific knowledge and advance in technical skill would in turn lead to more complexity in management, which would have to be of a high standard, not only to formulate policy but to integrate business and technical sections of industry.

Although he was then primarily concerned with introducing Commerce graduates into business, he also advocated that potential executives should have a liberal education, as well as a fair general knowledge of science without being specialists.

His first step was to arrange a meeting with a Committee of the Melbourne Chamber of Commerce in 1930, and his vision of the future is illustrated in the opening words of the address he gave at the time:

> "The administration of modern business raises issues of such complexity that the higher executive positions require men of exceptional ability. It is important, therefore, that some of the most competent students of the Universities should be attracted to business as a career.
>
> "A University student with a good Honours record and a strong and suitable personality should normally succeed in busi-

ness. He must, however, gain the necessary experience, and this may require some adjustment of business organization to provide an opening in the commercial world for a limited number of University graduates. Given the prospect of a few such appointments each year, the Universities would advise some of the ablest students who now take a professional course at the University to proceed to an Arts or Commerce degree."

The Committee of the Chamber responded well to his appeal, and, as a preliminary step, sent out a questionnaire to all members to enlist the interest of as many as possible. In view of the great changes which have taken place in the intervening years, it may be of interest to quote a few of the questions, which were at that time somewhat new to many in the business world:

1. "Have you any University graduates on your non-technical staff? If so, state the number."
   This brought replies from 96 firms, employing a total of 55 graduates and 30 holders of Diplomas of Commerce. The average, therefore, was a little less than one per firm, but this average was raised by three large firms which employed 59 graduates or holders of Diplomas, or nearly 70 per cent of the total.
2. "If you have not appointed any graduates, do you think it possible to find a position for one in your business?"
   Forty-three firms stated they were willing to employ graduates; others undertook to consider it, though felt they had no openings at the time. Generally, the replies showed willingness, but difficulty owing to circumstances, and not to aversion to taking graduates.
3. "Do you consider a qualified University graduate capable of ultimately filling an important executive position?"
   The answers were distinctly favourable. Sixty firms replied in the affirmative, and others thought it probable, though provided there was sufficient scope in the size of the business.
4. Asked whether such a graduate was likely to be more efficient ultimately than one who entered business at an earlier age and did not proceed to a higher educational course, forty-seven firms were definite in affirmatives.

From then on, applications from business houses for graduates increased each year, and Copland had the satisfaction of seeing a number of his Commerce graduates eventually occupying important positions.

In August, 1932, the Melbourne University Appointments Board was created, and co-opted a number of business men, so as to ensure a continuous link between the University and the City.

Since that time, the membership of the Chamber of Commerce has been greatly enlarged, and many other trade and industrial groups

formed, many of whom now look to the University for graduates in Commerce or Arts to train as prospective executives. The staff and scope of the Appointments Board have also increased, and it now serves many groups in the community, including Government departments, industries and schools, as well as giving advice and guidance to students and graduates of the University on careers that are likely to be available. The demand for graduates in recent years has frequently been greater than the supply.

Copland's early advocacy of the need for training high executives is now exemplified by the many training programmes which are available, particularly the important Melbourne Division of the Australian Institute of Management, which organizes among other things special study groups and conferences for senior executives.

The influence of the Melbourne University Summer School of Business Administration, which first opened in 1956 with an attendance of 31, is shown in the steady increase in applications; in 1957 there were 49, rising in 1958 and 1959 to 100.

Possibly, Copland himself did not foresee such a widespread and rapid change in the development of business and industry in Australia when he first advocated the employment of graduates, but it is now amply demonstrated that his vision was clear and true, and Commerce and other University graduates are able to secure appointments in business, where, provided they have the character and the personality, they can look forward to good promotion.

It is hard to compute the full value of Copland's work for the benefit of graduates and future students, and also in stimulating increased efficiency in business. His addresses and writings have been respected in all circles, being lucid, practical, and the result of considerable research.

He has also earned the gratitude of his country in other spheres, including public administration and diplomacy where he served with distinction, and on numerous financial and economic advisory committees to Government, and he also performed outstanding service as Prices Commissioner during the last war. He was the first Vice-Chancellor of the Australian National University at Canberra; in 1933 received the honour of C.M.G., and in 1950 was created a K.B.E.

His crowning achievement in business was to become the first Principal of the Australian Administrative Staff College at Mt. Eliza, near Melbourne, which he organized and developed in a comparatively short time. The College now provides three sessions annually for the training of senior business executives, on similar lines to those of the great Staff Colleges of Henley and Harvard.

His high intellectual talents made him an able speaker and debater, though he was always too sincere to make a parade of his achievements. Carlyle's definition of the man of true intellect—

"The noble hearted man withal, the true, just, humane and valiant man . . ."

may well apply to Sir Douglas Copland.

His wide circle of friends in this and other countries are proud of the honours which he has received, and the University, and Commerce graduates in particular, as well as the business community, will always owe him a debt of gratitude.

G. S. COLMAN

Melbourne.

THE TARIFF ENQUIRY, 1928

Sir Douglas Copland has played an outstanding part in a great number of issues of vital importance to Australia, but it is doubtful if any of these activities were of more importance than the writing of the Review of the Australian Tariff which Copland in conjunction with Brigden, Dyason, Giblin and Wickens carried out in 1928. The Report became available in book form from early in 1929, and was keenly read by an interested public, not only in Australia but also in England and America. The book was of particular interest to the members and staff of the Australian Tariff Board. I would like to pay my personal tribute to the help the Report gave me. I had joined the Board only a month or so before the book became available, and I had felt the inadequacy of my equipment for the task before me; it was of great value to have the findings of a highly qualified group of men who had, for a year or more, given concentrated thought to the very problems which now confronted the Board.

It has been most interesting to re-read the Report after all the intervening years. Once again one is struck by the care and sagacity shown in the attempt to assess the value or otherwise of the policy of Protection in Australia. The figures, which relate to the year 1926-7, seem strangely small against those of today, but otherwise the report is well up to date.

The Committee set out in a valiant attempt to measure the benefits and burdens that had followed the adoption of Protection in Australia, and this ran them into much tribulation because of the shortage of dependable data, but after careful use of the figures available, and studies of the problem from different angles, they came unanimously and firmly to an opinion which seems to have rather surprised them all, but which they state quite clearly:

> "The advantage of protection is in the maintenance of a larger population than could have been expected at the same standard of living without the protective tariff. . . . Given the basic Australian objective of seeking the largest white population at the highest standard of living, we consider that the protective tariff has been an effective means of securing it. The practical conclusion is that, having established this population, it would be disastrous to abandon the policy which has made it possible."

Before this important pronouncement was made, much careful work was done in measuring the development that had resulted and the costs incurred by the protection that had operated up to 1926-7. The Committee excluded from excess cost due to protection the higher prices of imported goods because the duties that were collected by Customs went into public revenue, thus saving taxation in other forms. They then proceeded upon the difficult task of estimating the

added cost of Australian protected production above the cost of duty free imports.

The method the Committee adopted in these computations has been summarized and discussed many times, and I will not attempt to traverse the ground once again. The conclusion that was reached was that the cost to export industries had been significantly increased by protection, but that under free trade the amount of manufacture that would be lost would considerably exceed the extension of primary industry that could follow at the lower costs.

The attempt to measure the cost and benefits of protection caused much discussion from experts all over the world. It would be futile for me to join in this discussion, but it is rather comforting to find that the experts differ so radically and so eloquently in their findings that an ordinary man can still dare to form his own conclusions. The verdict of the Report was generally accepted in Australia in 1929, and that conclusion still stands today.

One vitally important assumption made by the Committee related to the proportion of the duties used by protected industry. They assumed that in the case of commodities for which Australian manufacturers were holding only a small proportion of the market, it was reasonable to conclude that the whole of the duty was being used, but where Australian industry held most of the trade only half the duty was being used and in manufacture that was mostly sheltered only one-third of the duty was calculated as excess cost. Many checks were made before these assumptions were accepted. This seems rather a rough way at arriving at a very important estimate, but it is not easy to suggest an alternative method which could be applied within the time available. It is of interest to recall that in a wide review of many industries carried out by the Tariff Board in the following two or three years, these assumptions were generally supported.

The verdict arrived at was that Protection, with all its dangers, had been on the whole beneficially applied in Australia. Not only did it enable more people to earn an adequate income, but it also helped to provide a greater diversity of production, thus offering more choice as to occupations and giving greater stability to the national income, particularly in bad seasons or when export prices fell heavily.

The conclusion that Australia could gain from the careful application of a protective policy is associated with important warnings against excessive protection. These warnings come again and again throughout the Report. I quote a few typical examples.

Page 104:

> "It is clear that we have a great range in the costliness of protection. For some goods, excess costs may be up to 40 per cent of the output, and as much as double the wages and salaries paid for producing them. If all protections were as

costly as these extremes, the total excess costs would be double what we have estimated."

Page 30:

"The main practical objection to protection is one that applies with some force in Australia. It is that, once begun, tariff protection extends over other industries until any possible benefit is lost in increasing cost due to the protection of inefficient and uneconomic industries."

Page 121:

"We consider that protection should be looked upon as an expense and that the Tariff Board should regard itself as an authority charged with the grave responsibility of recommending expenditure of a substantial proportion of the national income on the establishment and maintenance of industries specified by itself."

The Committee emphasized that the protection that could be safely applied was restricted by the resources of the country. In 1928 these resources seemed sadly limited, and the Committee was anxious that the burden should not be increased:

"Our surplus resources available to subsidize industry are limited and will not stand any greater strain than imposed by the present tariff."

The Committee took a somewhat pessimistic view of the pastoral industry at the time of the Enquiry, but we must remember that Myxo was scarcely thought of then, and that Science, as applied to our pastoral and agricultural industries, was still in its swaddling clothes. Since then there have been great developments in our primary production, in mining, and in the vitally important industry producing iron and steel which is now selling its products at world prices. All these, and many other developments, have greatly increased our national dividend, making it possible to carry a much greater excess cost than was feasible in 1929. This great increase in our natural resources makes reasonable the continued expansion of protected production but does not lessen the need of the warning to apply with care each increase of the protection afforded.

The portion of the Report of greatest practical value is that which sets out the principles which should be applied in the discrimination between industries seeking protection. Some of these are summarized below:

(a) Preference should be given to industries with the least comparative disadvantage. This implies rejection of industries which need excessive duties, for they impose burdens on the community far in excess of the benefits derived from their establishment.

(b) The ability to apply mass production methods is essential and only industries capable of taking advantage of these methods should be assisted. This, the Committee pointed out, is more and

more important because of the increasing scale of industry abroad. The cutting up of the market between a number of competing manufacturers greatly weakens the chance of obtaining economic output.

This problem of the size of the market is a world-wide one and is illustrated in the final report of the Royal Commission on "Canada's Economic Prospects" printed in 1957. On page 236 the Commission reports relative to this subject: "One classic example was brought to our attention by the president of a large electrical manufacturing company who told us that a plant of minimum efficient size to manufacture refrigerators in the United States would have an output of 250,000 to 350,000 units per year. By contrast, the total Canadian output of refrigerators in 1955 was 267,000 units produced by 19 manufacturers!" One of the troubles involved in giving generous protection is that it encourages the fragmentation of an already small market. This applies particularly to Australia with its widely dispersed population.

(c) The Report recognizes the dilemma involved in (b). It is better to have concentration of production, particularly for a severely limited market. But then comes the risk of abuse by monopolies. The Report is emphatic on this issue: Page 116—"The time has gone by when business units with great economic powers can be considered as 'private' enterprise, with exclusive rights to their own information. Experience has shown that it is virtually impossible to regulate 'monopolies' by legislative enactments directed at mere forms, or by legal interpretation of what is 'in the public interest'. The best safeguard of the public interest is publicity, and with protected industries subsidized by the public the case for publicity in overwhelming."

(d) The Report is not happy about the so-called "elastic" tariff which often causes disruption. Stability is more important. There should be reviews of industries which are highly protected but sudden changes either up or down are dangerous.

(e) The Committee favours giving particular consideration to the amount of employment provided, but points out that too much stress is often placed upon the higher wages paid in Australia. Sometimes the duty operating is double the wages and salaries paid.

(f) The Committee is plainly sceptical as to the value of preferential duties, and quotes Alfred Marshall who, near the beginning of the century, criticized the mutual exchange of empire preferences carried out in the hopes of deriving gain thereby, and suggested that the parties should open their bargaining by the frank statement, "Imperial unity is an ideal worth much material loss; let us consider how best we can share this loss among us!" This issue is of particular importance to Australia today, as the preferential margins operating on our protective items are absurdly wider than those operating in other Common-

wealth countries. This seriously distorts our import trade and provides excessive protection against imports from good customer countries to whom we must offer a more reasonable market.

Conclusion

The Report is expressed in clear and simple language and a quite refreshing absence of the jargon often associated with tariff discussions. It carried conviction throughout Australia because of the frank and careful presentation of its views. True, the Report was almost lost sight of soon after it was printed when the sudden financial crisis in the early thirties forced the Government to cut down imports by applying big increases of duties and severe surcharges, but in the subsequent review of the duties by the Tariff Board and the gradual working towards a more stable policy, the influence of the work of the Committee can be plainly seen.

Another enquiry is now badly needed. Not so much as to what duties should be applied, but how Australian trade can be balanced without the continuance of Import Licensing.

This policy, applied in 1952 when once again our export income fell drastically, was intended as an emergency action only, but is with us still. The officers responsible have sought to limit the control to the safeguarding of our oversea funds, but inevitably it is operating as a powerful protective agency. As a result, external competition on many important products is being stifled, with the result that prices of these goods are being pushed up far in excess of duty paid prices. Serious abuse is taking place under cover of the present controls, and harmful monopolies are being built up. The position is dangerous and will become more so if Import Licensing is permitted to continue. Fortunately our export income has risen steeply and the figures available at the end of January make plain that there is now no justification for the continuance of these dangerous restrictions. What is needed is the best advice obtainable as to how Australia can escape falling again into this clumsy and costly attempt at control if and when the luck turns against us.

W. S. KELLY

Tarlee, South Australia.

PROFESSOR SIR DOUGLAS COPLAND : AN APPRECIATION

The Second Great War was in progress. The Union office telephone bell rang. It was the Hon. R. V. Keane. He said it was the wish of the Federal Government that I should accept the appointment of Adviser to Professor Douglas Copland, now Professor Sir Douglas Copland, Prices Commissioner for the Commonwealth. I told the Minister that I was of the opinion I was unsuited for the job as I was not an accountant. He said he wished me to accept the position. I asked if his wish was in the form of an order. He said, Yes, it was. Continuing, he said: "The nation is at war and Adviser to the Prices Commissioner is your work." I accepted. A day or two later the appointment was publicly announced.

The first to congratulate me was Mr. M. E. McCarthy, Secretary of the Prices Commission. Mr. McCarthy later became Prices Commissioner, and when Price Control was discontinued became Chairman of the Tariff Board. I told him I had grave doubts as to my ability to carry out such an important job. He assured me I would be a welcome member of the Prices team.

Within a short time I arrived in Canberra, where for the first time I met the Prices Commissioner. He received me quietly. In turn he introduced me to my fellow advisers, who, I learned, were each highly specialized in their activity in private life, and that they had been appointed because of their special knowledge.

I soon found that the organization of Price Control was based on team work. Professor Copland was team leader. The work given you needed full attention. Help was only given when asked for. Each adviser and each section leader in the organization had to make his own deductions on the problems presented him. The decisions made were expressed to the Commissioner for his final decision.

It was in this form Professor Copland organized Price Control. He placed his fullest confidence in those on whom he depended to assist him to give effect to perhaps the most important economic organization of the war period. To know the way Price Control was formed is to understand the undoubted ability of the Prices Commissioner to organize those working with him.

Within twenty-four hours of arriving in Canberra I was called into conference to assist by advising on an issue that concerned a large retail firm, perhaps the largest in Australia. The power of the Prices Commissioner was absolute in the matter of determining prices. He controlled the fixing of prices throughout Australia. With the knowledge of the power of the Prices Commissioner, it was interesting to me, who had been closely associated all my life with the Labor movement, to watch a Professor meet representatives of this extensive retail organization. The purpose of the conference was to determine

a method by which retail prices should be fixed for articles sold to the public by this firm. The conference opened quietly with a few words of explanation by the Commissioner. He said that the welfare of the nation was at stake. Australia was organizing on a war basis. Labor was controlled, wages were frozen, rationing of goods was in operation. In the interest of the nation, prices must be controlled. Within half an hour the conference was on a friendly basis. The firm agreed to work in close co-operation with Price Control. To do this they agreed to set up a prices organization within their own store to work in harmony with the principles of price control as set forth by the Prices Commissioner. The firm loyally abided by its agreement. From this conference developed the general pattern for price control for similar retail stores throughout Australia. This conference and the outcome was a signal victory for the Commissioner.

Because I was a past president of the Trades Hall Council and the president of the State Labor Party and had held important positions in both these organizations over many years, I had a ready contact with the workers within Price Control. Throughout the organization I found loyal and devoted men and women who gave their best because of the confidence they had in their chief. Officers stated that if given a subject which caused them doubt, they had no hesitation in seeking clarification by the Commissioner. The Commissioner, they stated, never denied his officers the right to approach him on any matter concerning their work. His office door was always open to members of his staff. Without familiarity the Commissioner fraternized with his staff. This gave a trust and confidence that was reflected in the work of those working under him.

Australia was unique among the nations of the world in that during the war the price of bread did not rise. The Commissioner knew that the confidence of the nation could be best retained by stabilizing prices in a way that the burden of the war did not fall more heavily on the working man with a family than on other sections of the community. Bread being a staple food of the nation, he knew it was necessary to keep its price at a minimum. He consulted his officers handling bread and flour prices and informed them of his policy. They made it their business to give effect to the policy of their leader.

Prices officers in co-operation with the Department of War Organization of Industry zoned Australia for making and delivering bread. Bread factories were organized to make bread for the respective areas in which they were established. As far as possible, long distance deliveries were cut out. The delivery of bread was confined to areas and to the number of bread carters needed to do the work efficiently. Along with the making and delivering of bread, the flour millers were under strict control. The price of flour, bran and pollard was fixed. The export of these commodities was controlled. The work of organizing the flour milling industry and the making and selling

of bread was done with very little friction. As a result, during the war period the price of bread did not rise, nor was there a lack of bread in Australia. The flour millers and bread manufacturers co-operated with Price Control to make effective this war effort. The basic work of organizing these industries on a war footing was that of the Prices Commissioner and his staff. Much of the war-time organizing of the bread and flour industries remains with the nation today.

A striking instance of the organizing work of the Prices Commissioner and his staff was that of the mining industry. Australia urgently needed minerals for war purposes. Representatives of mining interests were called to Canberra to discuss a greater output from the mines, and the efficient control of the price of minerals. A frank discussion occurred. The mining representatives stated that their assets were of a diminishing character. A ton of ore taken from underground reduced the store of mineral and the value of the mine. They said that the man on the land had rotating crops that continued to be produced indefinitely. In factories, machines continued to produce goods over many years. The seller of goods had an ever ready supply of articles coming forward, but when the mineral was taken from a mine it became a useless hole in the earth. The Commissioner told these hard-headed mining men that war was a much more serious business than measuring profits against production. He said that the organization of the mining industry and mineral production was urgently needed, otherwise it was possible that they would lose their mines and Australia could become a subject nation. The Commissioner urged the mining men to pool their resources with the purpose of aiding victory to the Allies. The mining men fell into line. They pooled their resources, made pools of essential metals, and accepted price control. The success of this conference was due to the tactful manner in which the Commissioner handled the various problems of the mining industry as they came forward. He was firm without being domineering.

Examining balance sheets filed with Price Control, officers found an instance of a firm that made an enormous profit. The file was forwarded to me for comment. I sought an interview with the Commissioner, and expressed to him my alarm at the profits shown. He agreed, but cautioned that the whole of the facts were needed before a judgment could be made. He said it would be better for the principals of the firm to come to Canberra and explain their balance sheet. This was done. I was present at the conference. The head of the firm was accompanied by his accountant. As the Managing Director walked into the conference I said to myself, "I wonder if this man knows that the nation is at war?" I had a contempt for him. The Commissioner opened the conference quietly. He read the profit shown on the balance sheet, and then asked the Managing Director if the figures were correct, and if they were correct, what was the

explanation. The director, unabashed and in a quiet way, unfolded a story. He said that after the First Great War his firm bought the bankrupt stock of a foreign company that had traded in machines and machine tools. They paid about 2/6 in the £1 for the stock. Sufficient of the stock was sold to recoup the firm for the deal. A good deal of the stock was not sold. This was written off. With the opening of the Second Great War officers of the Federal Government called and asked if they had tools available that could be used for either war or industrial production. When shown the stock the Federal officers stated they would take the lot, and would pay for them at current values. The firm explained to the Federal officers that the whole of the stock had been written off, and that they did not wish to accept the offer made. The Federal officers stated it was the policy of the Federal Government to pay current prices for all goods secured under such circumstances. The firm received a cheque for a substantial amount which was recorded in the balance sheet. The director went on to say that taxation had taken up to 19/- in the pound, which had left very little of the cheque that had caused them so much worry. With the explanation my anger turned to amazement. I realized how right the Commissioner had been when he advised me not to jump to conclusions until the whole of the facts were known.

After the enquiry I met the director who said that in his early life he had been a working engineer and a member of the Union. He told me how he got his first big break to success. He said he wanted to import from Sweden a well-known machine that is now extensively used in a primary industry. His bank refused to finance the proposition. Passing a cool stores he saw a large quantity of apples going to the store. He enquired if there were apples for sale. He was told he could have thousands of cases if he had the cash. He got into touch with the makers of the machines in Sweden and offered apples for the machines. Financial arrangements were made between an Australian and a Swedish bank and the deal was clinched. He made a substantial profit on the deal. The deal opened up a sphere of trading with Sweden that was lucrative to Australia.

An interesting phase of the organization of Price Control was the conference held each year which was attended by Deputy Commissioners from the respective States. Each State had problems peculiar to itself. Prices files interchanged between the States and head office in Canberra and between the respective States. There was always a possibility of the problems between the States not being properly understood. The annual conference generally cleared away these difficulties, particularly in regard to defining common practice and the interpretation of regulations.

The Commissioner invited his Deputies to submit their problems for an agenda to be submitted to conference. It was interesting to hear the varied opinions of the Deputies on the agenda items. The Commissioner would be the most attentive listener to the debates.

After full discussion he would, in a most tactful way, take up the debate and explain the purpose of the matter under discussion in relation to price control. No matter how far a Deputy had strayed in his understanding of a regulation the Commissioner never rebuked him or made him look foolish before his fellow Deputies. The Deputy in error would be kindly shown how he had misinterpreted the regulation, and there the matter ended. After a day of conference the Deputies would fraternize. These conferences caused a better understanding between the Deputies and between head office and the respective States.

One method of organizing the Prices Branch in the respective States into a united Commonwealth body was through memoranda forwarded by the Commissioner to his officers. When a new regulation was issued, the Commissioner would forward a clear statement to each Deputy showing the purpose of the regulation and how effect was to be given it. By this method he had all Prices Offices in the Commonwealth working as one to give effect to the new regulation.

The Commissioner would not tolerate interference with the principle of Price Control as a war effort. His firmness when needed was shown when a Cabinet Minister indicated that he intended to press that certain price control documents be laid on the table of Parliament. The Commissioner called his advisers together to discuss this matter. The Cabinet Minister was informed that officers of Price Control had taken the oath of secrecy, and that they would refuse to reveal to unauthorized persons information gained as officers of Price Control. The Minister did not proceed with the matter. The Commissioner and his advisers were determined that rather than break their oath of secrecy they would ask the Government to accept their resignations.

The Commissioner would not tolerate evasion of Price Control. He had the power to declare a firm that was evasive and refused to comply with Price Control regulations. By an order of declaration, a firm could not trade without an order from the Prices Commissioner declaring the price for each of the goods sold. An order of this kind was in effect a suspension of trading by the firm. This order was rarely made, but when made it was most effective.

An instance to show the effectiveness of an order of declaration is the case of a firm which kept its books in English combined with a foreign language. The manager was requested to present his books in English. He refused. The Commissioner made an order declaring the firm. The business was quickly brought to a standstill. It was not long before the manager was in Canberra with his books prepared wholly in English. Prices officers had no further trouble from this firm.

The Commissioner was a forceful and logical public speaker. He carried the message of price control into the various councils of the nation. A challenge by a *bona fide* organization was always accepted. The Commissioner was at home no matter what the constitution

of his audience. If he was talking to a Chamber of Commerce or such organization he brought to play his knowledge of economics. Addressing Trades Hall Councils or gatherings of workers he brought to play the knowledge he had gained as a lecturer on behalf of the Workers' Education Association. When addressing gatherings of members of primary industries he would impress his audience with his knowledge of the conditions of the man on the land. Generally the Commissioner informed such audiences that before he took his academic degrees he was a farm hand on his father's farm in New Zealand. When talking to an association of housewives he was always most sympathetic to the lady of the house, who was compelled to budget to make her husband's wages meet as far as possible the needs of the family.

Perhaps the strongest point in the administration of Professor Sir Douglas Copland as Prices Commissioner was his commonsense approach to every subject affecting price control, coupled with his wide knowledge of public affairs.

F. J. RILEY

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LEADERSHIP IN THE ACADEMIC COMMUNITY

In Utopia, according to Robert Maynard Hutchins,[1] the educational system provides the scientific and industrial strength the country requires plus the wisdom and appreciation needed to enable it to use that scientific and industrial power well. The universities of that wonderful country are dedicated to the constant review of basic ideas. They are thus centres of the highest human activity, independent thought, and therefore of criticism. In their freedom to follow this ideal the members are untrammelled by the university or their colleagues. Professors are in no sense employees; they are members of educational corporations, managing their own affairs. But with all this freedom to criticize they are not above criticism. Because "professors have the ordinary failings of people, the principal one of which is an inability to see beyond their noses where their own interests are involved", the Utopians support them with a Board of Trustees whose job it is to substitute for this lack of self-criticism; to criticize the university but not to run it. The Utopians control the size and organization of their universities to avoid the need for specialized educational administrators. They knew, of course, about our system, but our universities seemed so large and complex that Presidents and Vice-Chancellors had no time to think, let alone to teach or carry on research. It seemed odd "that the only person in the university who was not required to be a teacher, scholar or thinker was the head of it".

To dwell further on the delights of the best of all possible worlds would be pleasant indeed. We do talk, and must continue to talk, of limiting the size of our universities. We must continue to disappoint those who want us to teach all manner of things which we do not regard as university subjects. We are left even then with institutions that would be more fruitful, academically, if they were half their present size; where less time would be wasted if they were less complicated in structure; where communication at a personal level between disciplines and groups of disciplines is well-nigh impossible; and where internal stresses and strains are so galling and unsettling that the task of academic leadership has neither attraction nor compensation. University administration ceases to be a community responsibility. It becomes a distasteful imposition; an activity to be disdained, circumvented; it carries the connotation of financial control, having nothing to do with, and little knowledge of, educational policy.

It is imperative that Australians define their objectives and raise their sights if, educationally, they are to become Utopians. But

1. Robert M. Hutchins, *The University of Utopia* (The University of Chicago Press).

where does the responsibility lie? Whose job is it to describe the target, to identify it, to give range and elevation, the resistances, to plan the approach? It is not, at any rate, one man's function; not that of any small specialized group.

The Australian universities, with the Second World War, moved into a new era calling for continual study of their developing role and constant improvisation to cope with doubled student enrolments. The relationship of each to the State and the community it served became much more apparent. The dependence on government grants became complete. New community needs were identified and new institutions created. But it is very doubtful whether, to begin with, these needs were discussed so much by the established institutions as by the community itself; sometimes the old institutions offered no help and little advice in the solution of pressing problems.

Can it be said that the new university institutions in Australia came into existence with the goodwill of the older universities? Were models for their development prepared by the people who should have had the best understanding of what the student population would be, the likely extent of industrial development, and the best educational programme to provide?

These developments have highlighted the very grave problems of university administration and organization in this widest sense. How big should our universities be? How should students be selected? How staff recruited? How to ensure their teaching capacity? How specialization controlled? How should universities be run? How financed?

Inevitably these questions focus on and are directed at our Vice-Chancellors. These men, in the public and official eye, are the representatives of learning; the educational leaders of the community. Yet at home, in their own universities, they have no real power (as the American University President has). The Vice-Chancellor is in a very vulnerable position. Unless he had claims to scholarship he is unlikely to be respected within his university. But the demands of office effectively prevent him, unless he is a man of unusual capacity and vigour, from continuing in any but a token degree as a true academic colleague of his professors.

When he meets his colleagues from other Australian universities it is seldom that a really significant matter of educational policy is discussed to a point of satisfactory conclusion; and more infrequent that he is able to carry the day with his own colleagues and Council when he takes the reform back to his own university. It had appeared some years ago that the Australian Vice-Chancellors' Committee, with a grant from the Nuffield Foundation, felt and was moving to provide for, the need for a capable secretariat to enable it to maintain a constant review of problems of general importance—from staff salaries, superannuation and other aspects of recruitment, to an overall review of the nation's needs and of the possible bases for some co-

ordination of the more expensive lines of development. This movement has petered out, probably because some people see incompatability of concept between a well-informed, responsible Vice-Chancellors' Committee, and the independence of decision and action so traditional to universities. As a result it seems inevitable that the Universities Commission must make its own enquiries about the broader problems of Australia's academic development. The Vice-Chancellors' Committee has no effective secretariat; rarely does its agenda include an item of any significance.

To take an example. It appears quite impossible, without gravely reducing standards, for the Australian universities to recruit staff to give the student body of the next ten years even the minimal grade of education they are now receiving. The older universities may justifiably feel confident that they will have the prestige to attract the staff they need, but the result generally, and this can already be seen, is bound to be unsatisfactory competition between universities; people will be appointed to Chairs because they will not accept Senior Lectureships; and to Senior Lectureships because, qualifications notwithstanding, appointment to that grade is necessary to provide a sufficiently attractive salary. More and more, capacity to teach will be in the discard.

Yet there is no evidence of urgent thinking about this problem. It has been so easy to blame lack of money for the state of the universities, and now there is a Universities Commission to shelter behind!

The problems confronting our Vice-Chancellors are of fantastic proportions, and the difficulties we place upon them immense. It is said that the American College President ". . . . is expected to be educated, to have at some time been a scholar, to have judgment about finance, to know something of construction, maintenance and labour policy, to speak virtually continuously in words that charm and never offend, to take bold positions with which no one would disagree, to consult everyone and follow all proffered advice, and to do everything through committees, but with great speed and without error."

If that is so in an American university it is much more so here and means, simply, that a Vice-Chancellor must be of very considerable stature, in his capacity for leadership, and in his tactful and sympathetic understanding of the intimate working of his institution and of the legitimate call and requirements of the community. He is at once a defence and a bridge. He must see to the establishment of the physical facilities for good work—books, laboratories, equipment. He must lead his colleagues to a condition of academic harmony and mutual respect yet dispel stagnation. He must judge fairly on their needs and interpret these to his Council, to the government and to the public; and yet he must be ready and able, effectively, to defend non-conformity wherever it is associated with academic integrity.

Vice-Chancellors are customarily bowed down with the financial cares of their institutions. How much thought and time are they able to give to staffing policy? President Conant said that "solvency, a student body of high quality, and an outstanding faculty are the three requisites for the successful operation of a university".[2] Surely the third of these is most important. University professors are seldom tough enough. Their standards when advancing claims on behalf of their own departments or teams are notably different from those on which they criticize the proposals of others. They are prepared to sponsor or support appointments and promotions that they know are not good ones. "So-and-so has been about the place for a long time; we all know him; he's not a world beater but a decent chap; he may develop well!" It is remarkably easy for this attitude, unnoticed, to take a department or a university downhill academically, and the Vice-Chancellor, if the professors dodge this responsibility, must assume the unenviable role of calling for justification, explanation, outside advice.

With all these cares, it is the job of academic leadership to instil a completely sympathetic understanding of the true purpose of the institution and of the part that the several groups have to play. This means that the Vice-Chancellor has to be constantly in touch, and frank, with his colleagues. He must see to it that important information affecting the university is made known; he must have some way, preferably by personal contact, of disclosing his mind to his colleagues; he is responsible for developing a system of communication within the university which engenders responsible internal self-criticism, understanding and confidence, and which builds up a community spirit that transforms each member into an enthusiastic public advocate of the institution and its policies.

In Australian universities we are inclined to bedevil our academic leaders by leaving too much to them without committing to them sufficient authority and trust to enable them to act decisively. We plague them with detail and shackle them with committees—committees which, because of the size of our institutions, cannot be truly effective.

The result seen in not a few universities is that the leader comes to lose the vision. Antagonisms develop which destroy the harmony of the community and influence his judgment. The bridge between the Council and the work of the university, between the institution and the community, feels the strain, and danger results.

Could we not give our academic leaders a little more authority to act on their own judgment? A little more trust? And would we not at the same time be wise to make arrangements that require and enable a Vice-Chancellor (and indeed other academic administrative officers) to step down after about seven or eight years in office? If he wishes to retire from the academic world, it would be

2. *Harvard University President's Report*, 1951-52, p. 10.

well worth while to make it financially possible for him to do so. There is no good reason, however, why an attractive chair—out of the stream of university administration—could not be provided. It has been done elsewhere, and we would probably find that such a provision would attract to academic administration those with more nearly the desirable qualifications for office.

Nevertheless, whatever the answers might be with regard to the administration of large universities, it must be admitted that it is difficult for self-criticism within an old-established institution to effect much in the way of reform. Many valid arguments can be advanced for perfecting the existing institutions before creating new ones. But the case for new universities, as the growing points for the major institutions of 50-100 years hence and as centres of opportunity for educational progress, is a strong one.

New institutions have enviable opportunities. Within certain background limits they can, if they are wise, arrange their affairs to benefit from experience in other universities. They provide some opportunity for academic experiment, and they call for an organizational tailoring process—shaping the administrative cloak to the growing frame.

The new university must inevitably be substantially in the hands of administrators and planners. It would be nice to see the old universities sponsoring break-away groups and thus providing the ready-made core and experienced enthusiasm for academic self-government at the outset. But as these things go, the first decisions have to be taken by Councils and administrators, and no matter how academically eminent the councillors and administrators, their capacity to establish a university is suspect. In America it is said[3] that the function of the College Board of Trustees is to elect a President; his is then the responsibility for running the university. We do not cloak our Vice-Chancellors with this kind of power. Rather, we would say that the job of the governing body of a new university is to endow it with a framework within which it will run itself; to recruit at the outset scholars of high standing who can themselves be trusted to lead the university's development and perpetuate those standards; to encourage responsible internal administration by placing responsibility and trust in the senior members of the university; to be always interested in the work of the institution as an education unit; to require justification of policies and procedures and their consistent application; to protect from outside influences and to guard against complacency and stagnation.

One such new institution, the Australian National University, was founded under happy auguries. The universities were entering upon a new era of great responsibility but with awakened interest and support. The National University was backed by all political

3. Quoted in H. S. Lewis: "The Trustees of the Privately Endowed University", *The American Scholar*, vol. 22, p. 18.

parties, and was fledged under the accommodating financial wing of the Commonwealth Government. The idea excited the interest of many of Australia's best scholars and scientists who ungrudgingly gave their counsel and support and have remained its true friends. It would be hard to picture a better Interim Council for the job. Its membership included those of wide academic experience and interest. Its first academic advisers provided lucid and practical prescriptions for the development of the community and its work, and then gave devoted care until the organization deemed itself ready to develop its own policy.

To the Interim Council and to the academic advisers one question loomed most importantly. It was by no means accepted that a first rate academic institution could be established in Canberra; it was less likely that it could be done quickly. There were many who said that a university could not be founded on research and research training alone. With a good Vice-Chancellor quickly in office those who believed in the idea of the Australian National University were confident it could be done. There was no room for mistakes in making the first appointments.

Copland saw the vision. He not only responded readily to the invitation but was quickly on the job. For the five years of his appointment he lived the Australian National University. An early riser, he each day performed two days' work; and to, at any rate, the younger men associated with him, a link of the deepest personal affection was forged—affection that stemmed from the inspiration of working intimately with him; affection that knew and accepted quirks of temperament; that warmed to the idealist.

Vice-Chancellors cannot be all things to all people. It is impossible always to charm and never offend. The Australian National University is a monument to the inspiration of many minds, but certainly not the least to its first Vice-Chancellor.

What can one read from the first five years of the development of the University under his leadership? First, perhaps a seeking out of able Australians and a willingness to back young men of high promise. Add to this that each new member was helped, by a generous and tolerant understanding, to an imaginative conception of the wider role of his own work in the context and framework of his research school and the university.

Then an atmosphere that asserted success without contemplating failure; that asserted the interdependence of scholar and scientist and rejected the self-sufficiency of research institutes; that led to world-wide acceptance of a new university with attractive facilities and high promise.

In university administration there is doubtless an ideal composition of qualities: leadership; a strong dose of vigour; enough of the autocrat to ensure action but the tact and good judgment to get the best administrative advice and support from the academic body;

a capacity for delegation and for sponsoring self-government without growing out of touch; a balance of time spent knowing and understanding the university as against travel and contacts with the outside world; the capacity to handle relationships, not only or even primarily with governments and the public, but the whole range of those relationships that produce the stresses and strains within and upon universities—or the harmony, confidence and sympathetic understanding that generate a common purpose—the advancement of knowledge.

Now that twelve years have passed since recruiting began it is possible to see the first five years in reasonable perspective and to know that it would not have been possible to find, for the task in hand, leadership that was more ideally suited to it.

R. HOHNEN

Australian National University.

Perhaps it would help, but you don't have to be an economist to realize that in the 1950's things happened which took most Australians by surprise, and for which we were ill-prepared: especially those of us who came to adulthood during the thirties. True enough, we had heard a good deal in the later years of the war about the post-war world, and the brave new things it would offer us. But we didn't believe all we were told, and when the war ended we had to go about the unromantic business of getting started on whatever it was we decided to do. It wasn't long, either, before international politics began to look as ominous as ever. And in any case, we didn't really have any personal standards by which to judge prosperity: prosperity hadn't been in our line.

But as the fifties drew on we at least became aware that things were happening rather faster than previously. Prices were going up. So, one way and another, was our pay. The Korean war came and went. I remember walking in the main street of Yass one day, wondering when the salary review on which my employers had embarked would reach my level, and seeing a farmer take a sheep and a lamb from the back seat of a Daimler. A lot of companies seemed to be doing rather well. The government's immigration programme really did seem to be working. There was a good deal of physical work—buildings, roads, electricity schemes and the rest—going on, not only to fill the gap of the war years, but things which would have looked new, and big, at any time.

In fact, you could hear people asking whether we were not overdoing it: whether we should be able to control inflationary pressure, whether our cost structure was not going beserk. And not all those who talked this way were old. Some were quite young, and economists to boot. Their misgivings were, moreover, of the kind which appeal to Australians, who are somewhat prone to believe this year's drought will be as nothing compared with next year's flood. But for all this things seemed to get better. The seasons were good, and most things seemed to be improving. Gradually, quite ordinary people got used to the new concept of economic expansion, and experienced a little surprise that it was coming about with so little upset to the political and economic framework with which we had grown up.

Looking back, it is not surprising that these changes focused attention on the question of administration in all its forms, and made us wonder whether there was such a thing as administrative skill, a thing which could be identified, trained and used in the very varied tasks which confronted an expanding society. I myself had long been interested in these questions. All my days I had worked in administrative jobs in the universities, and there is no tougher school. The university administrator is paid to produce circumstances

in which ordered development can take place in a community which consists largely of individualists, not to say prima donnas. It is therefore very readily assumed that he is a professional obstructionist, with no understanding of the intellectual life, and not much understanding of anything else either. Given half a chance, he will build an empire with money intended for the university's real purposes, produce a farrago of absurd regulations and procedures, and dump them down, trussed in red tape, squarely across the path of any worthwhile scholarly achievement.

All too often, of course, this is a pretty true assessment, but throughout my working days I had come across a small number of men in my own field who did their administrative work with a very sensitive awareness of academic aspirations, and who had the vision, and could summon up the tact, to reconcile the individual interests of the scholar with the order which is essential to the sound development of a scholarly community. These were rare birds, but you could pick them out, and it did not seem to matter what sort of work they did—finance, building, or general educational administration—they achieved respect and affection, and got results. I had often wondered whether there were a set of qualities and skills which were somehow appropriate to administration as such, in whatever field might be concerned.

This is no place to enter into this debate. Let me simply state my conviction that there is an identifiable range of work which is distinctively administrative, and that there are combinations of abilities which make for success in it. These abilities include the power to see the purpose and life of an organization as a whole; a sense of relevance and order; skill in assessing the capacities of others and eliciting loyalty; ability to plan the rational use of limited resources; and a capacity to combine initiative with a pervading sense of responsibility to those to whom one is accountable. A pleasant personality is also a help.

Reflections of this kind led a group of men in the Sydney Rotary Club in the early fifties to consider the formation of a body to encourage the development of administrative skills in Australia. They had little enough to build on. Advanced courses in business management had been common for some years in senior American universities. An Administrative Staff College had been established after the war at Henley-on-Thames. The Institute of Management, and some individual professional associations in Australia, were attacking special phases of the problem. But what was wanted was a new and more highly trained generation to tackle the whole range of problems which were arising in the course of our national development—in business, in government, in education, in the trade unions, and in all the other fields where administrative wisdom counts. It was all necessarily a bit vague, but the people concerned realized that it mattered, because they were themselves involved in major enterprises

and knew how short those bodies were of people with real powers of leadership.

The Australian Administrative Staff College was established in 1955 with the support of some forty or fifty leading Australian businesses, and the College Council was faced with the problem of finding a first Principal. What was needed was a distinguished Australian who could move easily in business, government and academic circles, and who would provide inspiration and leadership to the men who were to come into the College.

Sir Douglas Copland was then Australian High Commissioner in Ottawa. He was already a national figure in Australia—economist, academic leader, public administrator, vice-chancellor, and diplomat. He was also known as a vigorous publicist, uninhibited in pursuit of goals he felt to be worth achieving, and not unduly restricted by rules he thought vexatious. When it was learned that he would be willing to lead the new body his appointment came quickly, to the lasting credit of those responsible.

Copland arrived back in Australia in October, 1956, and the College began its programme less than a year later. Even to those who knew him, this was an astonishing performance. It called into play all his powers, and was done, as far as we all could see, without one glance behind. During that year support of the venture by businesses and other bodies grew rapidly, a magnificent permanent home for the College was bought (and largely paid for), a small staff was recruited, a course of studies broadly on the Henley lines was developed, and the myriad details involved in establishing a new organization were attended to. Here was Copland at his best—innovator, leader, controversialist, administrator, teacher—and those of us who went through those early days of the College with him will never recall the experience without feelings of affection and gratitude.

In just over two years of active operation the College, under Copland's leadership, has achieved a role of the first importance in Australian development. Broadly speaking, the College's purpose is to enhance administrative skills in all fields of endeavour, and it does this by gathering together, thrice yearly, a group of forty-four men of proved managerial skill from business, government, union and other fields. The men remain in residence for twelve weeks, and follow a carefully planned course designed to throw up the major problems encountered in any administrative unit. It is not, in any direct sense, a teaching body. The essence of its work is to allow the men in each session to compare their experience and standards, and to reflect on their own work in relation to the whole progress of Australian affairs. Already some two hundred and fifty men have had this experience, and it is on the widening of their horizons and interests, and on the increased skill with which they handle problems, that the College's reputation will depend. But the guiding and propelling influence in its earliest years has been that of Douglas

Copland, and it is already clear that by his work in the College he has added another outstanding chapter to his record of service to Australia.

It will be for others to speak of Douglas Copland as an economist. But I cannot forbear to mention one personal observation in this field. Throughout his period in the College, despite the stresses and pressures of initiating a new venture, Copland has taken a leading part in shaping economic opinion in Australia. He is, as is clear from his record, a born innovator, always engaged on something new and a little hazardous. (Perhaps this is why he likes to stress, by contrast, his earlier connections with such stable institutions as farming, the Church of Scotland, and the Chinese people.) When he came back from Canada he saw a danger that Australia, by timidity and hesitation, would lose the great opportunities which the next decade offered, and in these three years he has preached adventure, advance, and expansion with all the power and challenge of an Old Testament prophet. I believe that this has been a source of great strength to Australian opinion. I also believe, more generally, that it is in the best interests of a free society that men called to high office should be encouraged to speak, as Copland has done, on the great issues of the times with candour, vigour and independence.

Sir Douglas moves now into what I suppose must be called retirement. Whether he will be able to give that state the broader content and air of discovery which he has brought to so many other things remains to be seen. I should not be surprised if he did; time is on his side.

MAURICE BROWN

Australian Administrative Staff College.

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*The Editorial Board is grateful to Miss Alicia Murdoch and Mr. G. W. Johnson, who have compiled this list of Sir Douglas Copland's writings, and to all those who have helped by supplying information. The list does not purport to be complete, especially since time has not permitted an investigation of newspaper articles, and for a small number of items it has not been possible to obtain full references.

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